KOVALENKO, P.P., prof.; DEMICHEV, N.P. (Rostov-na-Donu); KORZH, A.A., prof. (Khar'kov).

Reviews. Ortop., travm. i protez. 26 no.8:86-91 Ag '65.
(MIRA 18:9)

KORZH, A.A., prof. referent

Report on the work of the societies of traumatologists and orthopedists for June-August, 1964. Ortop., trav. i protez. 25 no.11:86-91 N '64. (MIRA 18:11)

NOVACHENKO, N.P., prof. (Khar'kov); KORZH, A.A. (Khar'kov); SKOBLIN, A.P. (Khar'kov)

Surveys and book reviews. Ortop., travm. i protez. 25 no.12: 67-73 D '64. (MIRA 19:1)

1. Chlen-korrespondent AMN SSSR (for Novachenko).

KORZH, A.A., prof.

Osteoplastic fixation of the spine in serious forms of spondylolisthesis. Ortop., travm. i protez. 26 no.4:40-43 Ap '65.
(MIRA 18:12)

1. Iz kafedry ortopedii i travmatologii (zav. - chlen-korrespondent AMN SSSR prof. N.P.Novachenko) Ukrainskogo instituta usovershenstvovaniya vrachey (rektor - dotsent I.I.Ovsiyenko).

BERNADYUK, Z.A.; LEVCHENKO, D.N.; PUSHKAREV, V.P.; CHIRIMANOV, P.A.; KORZH, A.F.; ZHURAVLEV, K.A.; KOVALENKO, N.F.

Petroleum desalting in electro-desalting units in the presence of the OP-10 nonionogenic demulsigying compound. Khim.i. tekh.topl.i masel 5 no.9:31-37 S '60. (MIRA 13:9)

1. Novo-Gor'kovskiy neftepererabatyvayushchiy zavod i Vsesoyuznyy naucnno-issledovatel'skiy institut po pererabotke nefti i polucheniyu iskusstvennogo zhidkogo topliva.
(Petroleum--Refining--Desalting)

KOLLODIY, K.K.; KORZH, A.P.

Basic trends in the increase of lobar productivity in Kuznetsk Basin coal preparation plants. Ugol' 37 no.1:44-47 Ja '62. (MIRA 15:2)

1. Kuznetskiy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley.
(Kuznetsk Basin—Coal preparation plants—Labor productivity)

KORZH, A.P.

Mechanical coal preparation in the Kuznetsk Basin. Nauch. trudy KuzNIIU-gleobog. no.2:70-77 '64. (MIRA 17:10)

KORZH, A.P.

Coal grading in the Kuznetsk Basin. Nauch.trudy KuzNIIUgleobog. no.2: 221-224 '64. (MIRA 17:10)

SHAPIRO, G.A., podpolkovnik meditsinskoy sluzhby, kandidat meditsinskikh nauk; KORZH, A.V., mayor meditsinskoy sluzhby.

Treating logoneuroses. Voen.-med. zhur. no.9:52-54 S '55.
(STAMMERING) (MLRA 9:9)

KORZH, B. A., Cand Vet Sci -- (diss) "Materials on experimental tuberculosis in the young of hens." L'vov, 1960. 24 pp; (Ministry of Agriculture Ukrainian SSR, Khar'kov Zooveterinary Inst); 150 copies; price not given; (KL, 50-60, 135)

DORONIN, N.N., prof.; MURATOV, S.I., dotsent; KOŁZH, B.A., dotsent; GEVKAN, I.I., kand. veter. nauk; KARABIN, Ye.V., assistent

Studying tuberculosis in cattle infected with the pathogen of the avian type. Veterinariia 42 no.11:34-35 N '65. (MIRA 19:1)

1. L'vovskiy zootekhnichesko-veterinarnyy institut.

L 08323-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AR6033785 SOURCE CODE: UR/0058/66/000/007/E050/E050

39

AUTHOR: Korzh, E. D.; Korzh, V. P.

TITLE: Determination of heat volume released during plastic deformation of a medium with nonlinear strengthening

SOURCE: Ref. zh. Fizika, Abs. 7E373

REF SOURCE: Uch. zap. Ural'skogo un-ta. Ser. fiz., vyp. 1, 1965, 151-154

TOPIC TAGS: plastic deformation, heat, strengthening

ABSTRACT: The diagram of a plane deformation is used to describe the compression of a sample by die blocks of different widths. The equation of the condition of the deformed medium is postulated in the form of $\delta=\delta_s+E\varepsilon^{\alpha}$, in which δ is the stress, ε is the deformation, α is the indicator, E is the strengthening modulus, and δ_s is the yield point. The quantitative correlation between the deformation energy transformed into heat, and the total deformation energy, is derived by a standard method. V. N. [Translation of abstract]

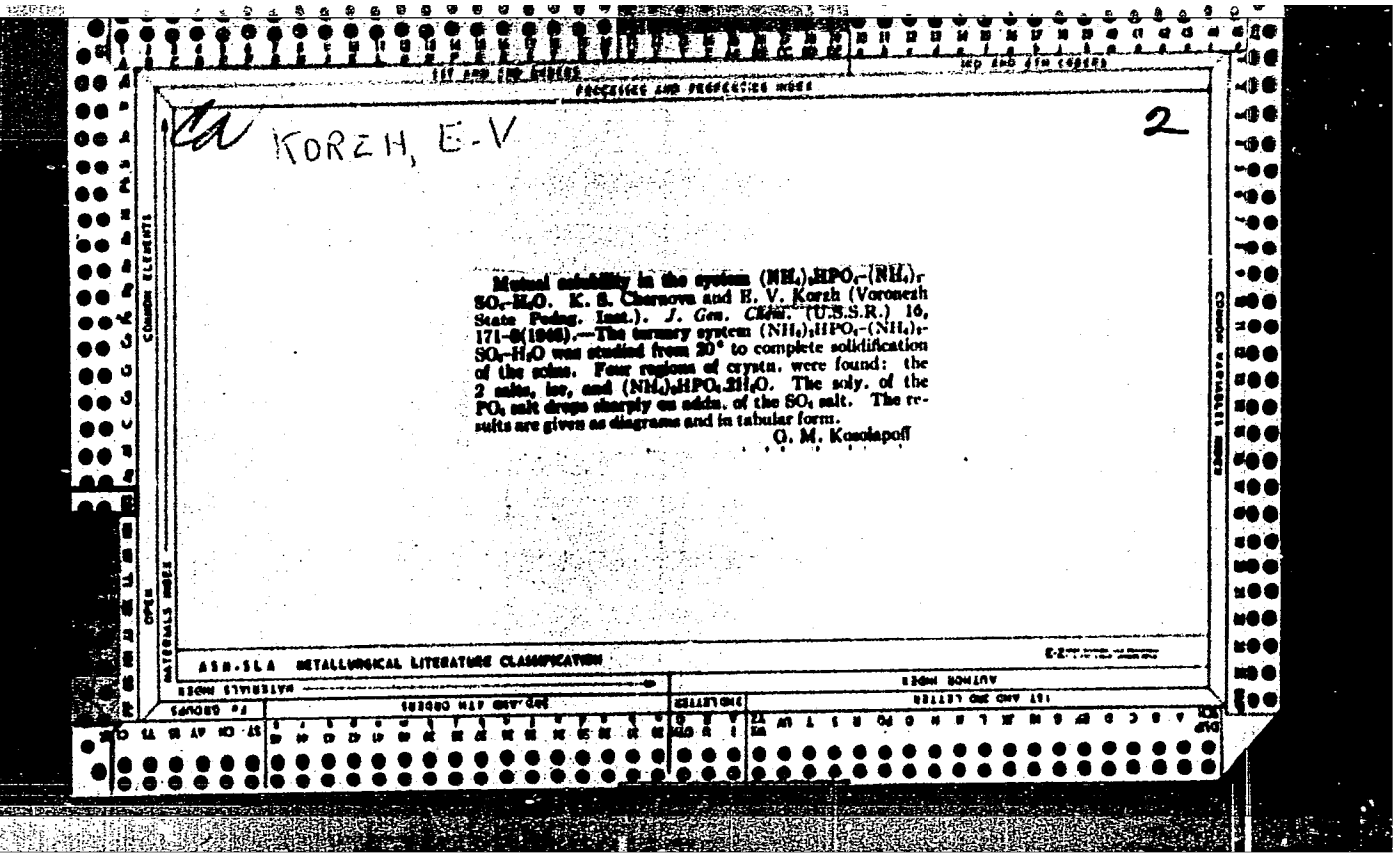
SUB CODE: 20/

Card 1/1 nst

BERDYSHEV, A.A.; KORZH, E.D.

Exchange interaction of internal and external electrons of transition metals. Fiz. met. i metalloved. 12 no.4:476-479 O '61. (MIRA 14:11)

1. Ural'skiy gosudarstvennyy universitet imeni A.M. Gor'kogo.
(Ferromagnetism)
(Free electron theory of metals)



KORZH, E.V

2

Mutual solubility in the system $(NH_4)_2HPO_4$–$(NH_4)_2SO_4$–H_2O. K. S. Charnova and E. V. Korzh (Voronezh State Pedag. Inst.). *J. Gen. Chem.* (U.S.S.R.) 16, 171–6(1946).—The ternary system $(NH_4)_2HPO_4$–$(NH_4)_2SO_4$–H_2O was studied from 20° to complete solidification of the solns. Four regions of crystn. were found: the 2 salts, ice, and $(NH_4)_2HPO_4.2H_2O$. The soly. of the PO_4 salt drops sharply on addn. of the SO_4 salt. The results are given as diagrams and in tabular form.

O. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AID P - 2922

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 19/32

Author : Korzh, F. T., Eng.

Title : Cleaning turbine condensers with no load decrease

Periodical : Elek. sta., 7, 51, Jl 1955

Abstract : The method of cleaning the condenser of one large power plant supplied with water from a pumping station with a flow of water mixed with sand is discussed. Tables with data on condensers and on results of the experiments are given.

Institution : None

Submitted : No date

KORZH, G.I.

Roller tool for finish machining of large holes. Mashinostroitel' no.12:20 D '63. (MIRA 17:1)

KORZH, G.V., inzh.

Result of observations on mining operations with the use of shield supports in Moscow Basin longwalls. Izv.vys.ucheb. zav.; gor.zhur. no.11:3-8 '58. (MIRA 12:8)

1. Moskovskiy gornyy institut.
(Moscow Basin--Mine timbering)

KORZH, G. V., Candidate Tech Sci (diss) -- "Controlling the roofs in the shield lavas of the Moscow Basin". Moscow, 1959. 14 pp (Min Higher Educ USSR, Moscow Mining Inst im I. V. Stalin), 150 copies (KL, No 22, 1959, 115)

ROSHCHUPKIN, Igor' Georgiyevich, dots.; ANAN'IN, Gleb Pavlovich, dots.; ARSLANOV, Nikolay Konstantinovich, dots. Prinimali uchastiye: KOLONCHUK, V.M., inzh.; SIDOROV, N.A., inzh.; POL'ZIKOV, I.N., dots.; KORZH, G.V., kand. tekhn. nauk; BARANOV, A.I., otv. red.; OKHRIMENKO, V.A., red. izd-va; SABITOV, A., tekhn. red.

[Working mineral deposits] Razrabotka mestorozhdenii poleznykh iskopaemykh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1962. 590 p. (MIRA 15:4)
(Mining engineering)

KORZH, I., inzh.

We discuss aspects of work organization. Stroitel' no.4:19 Ap '59.
(MIRA 12:6)

(Building)

KORZH, I.A.; KOPYTIN, N.S.; PASECHNIK, M.V.; PRAVDIVYY, N.M.; SKLYAR, N.T.; TOTSKIY, I.A.

Scattering of 0.5 and 0.8 Mev. neutrons by light and medium nuclei. Atom energ. 16 no.3:260-262 Mr '64. (MIRA 17:3)

PASECHNIK, M.V.; BATALIN, V.A.; KORZH, I.A.; TOTSKIY, I.A.

Scattering of 0.5 and 0.8 Mev. neutrons by medium and heavy nuclei.
Atom energ. 16 no.3:207-211 Mr '64. (MIRA 17:3)

KORZH, I.A. [Korzh, I.O.]; KOPYTIN, N.S. [Kopytin, M.S.]; PASECHNIK, M.V. [Pasichnyk, M.V.]; PRAVDIVYY, N.M. [Pravdyvyi, M.M.]; SKLYAR, N.T. [Skliar, M.T.]; TOTSKIY, I.A. [Tots'kyi, I.A.]

Elastic scattering of 0.65 Mev. neutrons by atomic nuclei. Ukr. fiz. zhur. 8 no.12:1323-1327 D '63. (MIRA 17:4)

1. Institut fiziki AN UkrSSR, Kiyev.

KORZH, I.A. [Korzh, I.O.]; SKLYAR, N.T. [Skliar, M.T.]

Angular distribution of 0.3 Mev. neutrons elastically scattered by atomic nuclei. Ukr. fiz. zhur. 8 no.12:1389-1391 D '63. (MIRA 17:4)

1. Institut fiziki AN UkrSSR, Kiyev.

KORZH, I.A. [Korzh, I.O.]; SKLYAR, M.T.; TOTSKIY, I.A. [Tots'kyi, I.A.]

Differential cross sections of neutrons elastically scattered by Si, Cr, Zr, Pb, and Bi nuclei. Ukr. fiz. zhur. 9 no.5:577-578 My '64. (MIRA 17:9)

1. Institut fiziki AN UkrSSR, Kiyev.

ACCESSION NR: AP4020339 S/0089/64/016/003/0260/0262

AUTHOR: Korzh, I. A.; Kopy*tin, N. S.; Pasechnik, M. V.; Pravdivy*y, N. M.; Skiyar, N. T.; Totskiy, I. A.

TITLE: Scattering of neutrons with energies of 0.5 and 0.8 Mev. in light and intermediate nuclei

SOURCE: Atomnaya energiya, v. 16, no. 3, 1964, 260-262

TOPIC TAGS: neutron scattering, light nucleus, intermediate nucleus, threshold detector, anisotropy, neutron C, Na, Mg, Al, Ni, Cu, Se, Te

ABSTRACT: Measurements of angular distributions of elastically scattered neutrons with energies of 0.5 and 0.8 Mev. in light and intermediate nuclei (C, Na, Mg, Al, Ni, Cu, Se, Te) were completed in 1959 by a method described by M. V. Pasechnik, ("Atomnaya energiya", 16, 1964, 207). A detector was selected as threshold in order to prevent the recording of nonelastic scattered neutrons. Taking this threshold into account, the scattering of neutron energy was ± 50 kev. for both neutron energies so that the results regarding resonances for all tested nuclei may be considered as average. Measurements were conducted for 8

Card 1/2

KORZH, I.A. [Korzh, I.O.]; SKLYAR, M.T. [Sklar, M.T.]; TOTSKIY, I.A. [Tots'kyi, I.A.]

Scattering of 300, 500, and 800 Kev. neutrons by Mo, Sb, W, and U nuclei. Ukr. fiz. zhur. 9 no.9:930-932 S '64. (MIRA 17:11)

1. Institut fiziki AN UkrSSR, Kiyev.

KORZH, I.A. [Korzh, I.O.]; KASHUBA, I.Ye. [Kashuba, I.IE.]

Elastic scattering of 0.8 Mev. neutrons, and an optical nuclear model. Ukr. fiz. zhur. 10 no.6:586-596 Je '65. (MIRA 18:7)

1. Institut fiziki AN UkrSSR, Kiyev.

KORZH, I.A.; KASHUBA, I.Ye.; TOTSKIY, I.A.

Elastic scattering of medium-energy neutrons, and an optical nuclear model. Izv. AN SSSR. Ser.fiz. 29 no.5:862-867 My '65. (MIRA 18:5)

1. Institut fiziki AN UkrSSR.

L 16657-66 EWT(m)/EPF(n)-2/EWA(h)
ACC NR: AP6005524 (N) SOURCE CODE: UR/0089/66/020/001/0008/0017

AUTHOR: Korzh, I. A.; Pasechnik, M. V.; Totskiy, I. A. 30 B

ORG: none

TITLE: Scattering of moderate energy neutrons 44.55

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 8-17

TOPIC TAGS: neutron scattering, thermal neutron, elastic scattering, inelastic scattering, nuclear scattering, nuclear shell model, optic model

ABSTRACT: This paper is a brief review of research on scattering of neutrons in the intermediate energy range using the electrostatic generator at the Institute of Physics AN UkrSSR. Data are given on inelastic scattering of neutrons with energies of 0.8, 2.5, 3.3, 3.6 and 4.1 Mev by nuclei of the following elements: C, Na, Mg, Al, P, S, Cl, Ca, Cr, Fe, Co, Ni, Cu, Zn, Se, Zr, Mo, Ag, Cd, Sn, Sb, Te, I, Ba, W, Hg, Pb, Bi and U. The resultant data were used for establishing the effect of nuclear shells in inelastic scattering of neutrons. The angular distribution of elastically scattered neutrons with energies of 0.3, 0.5, 0.65 and 0.9 Mev by the nuclei

UDC: 539.171.016+539.171.017+539.172.4

Card 1/2

L 16657-66
ACC NR: AP6005524

of 25 elements were studied in a wide range of mass numbers: C, Na, Mg, Al, Si, K, Cr, Fe, Ni, Cu, Zn, Se, Zr, Mo, Ag, Cd, Sn, Sb, Te, Ba, W, Hg, Pb, Bi, and U. The experimental data on angular distribution of elastically scattered neutrons were used for verifying the applicability of the optical model of the nucleus for describing processes of elastic scattering at an energy lower than 1 Mev. Orig. art. has: 6 figures, 3 tables.

SUB CODE: 20/ SUBM DATE: 17Mar65/ ORIG REF: 019/ OTH REF: 008

TS
Card 2/2

Card 1/2

L 08936-67
ACC NR: AP6016050

Element	Energy of neutron from photoneutron source E_n, Mev	Total cross section σ_t, barn	Total cross section σ_t, barn calculated	Elastic scattering cross section σ_e, barn	$\overline{\cos\theta}$	Transport cross section at elastic scattering σ_{tre}, barn
Ti	0.3	2.79	2.85	2.69±0.19	0.14±0.02	2.30±0.22
	0.5	2.42	2.72	2.57±0.10	0.17±0.01	2.12±0.12
Co	0.5	4.48		4.77±0.24	0.13±0.01	4.14±0.27
	0.8	3.42	3.54	3.73±0.26	0.21±0.03	2.94±0.32

Card 2/2 nst SUB CODE: 20/ SUBM DATE: 12Jan66/ ORIG REF: 003/ OTH REF: 004

EWT(m)/EPF(n)-2/EWP(q)/EWP(b)/EWA(h) ... AFWL/SSD/ASD(d) JD/JG
.../009/009/0929/0932

... NR: AP4046658

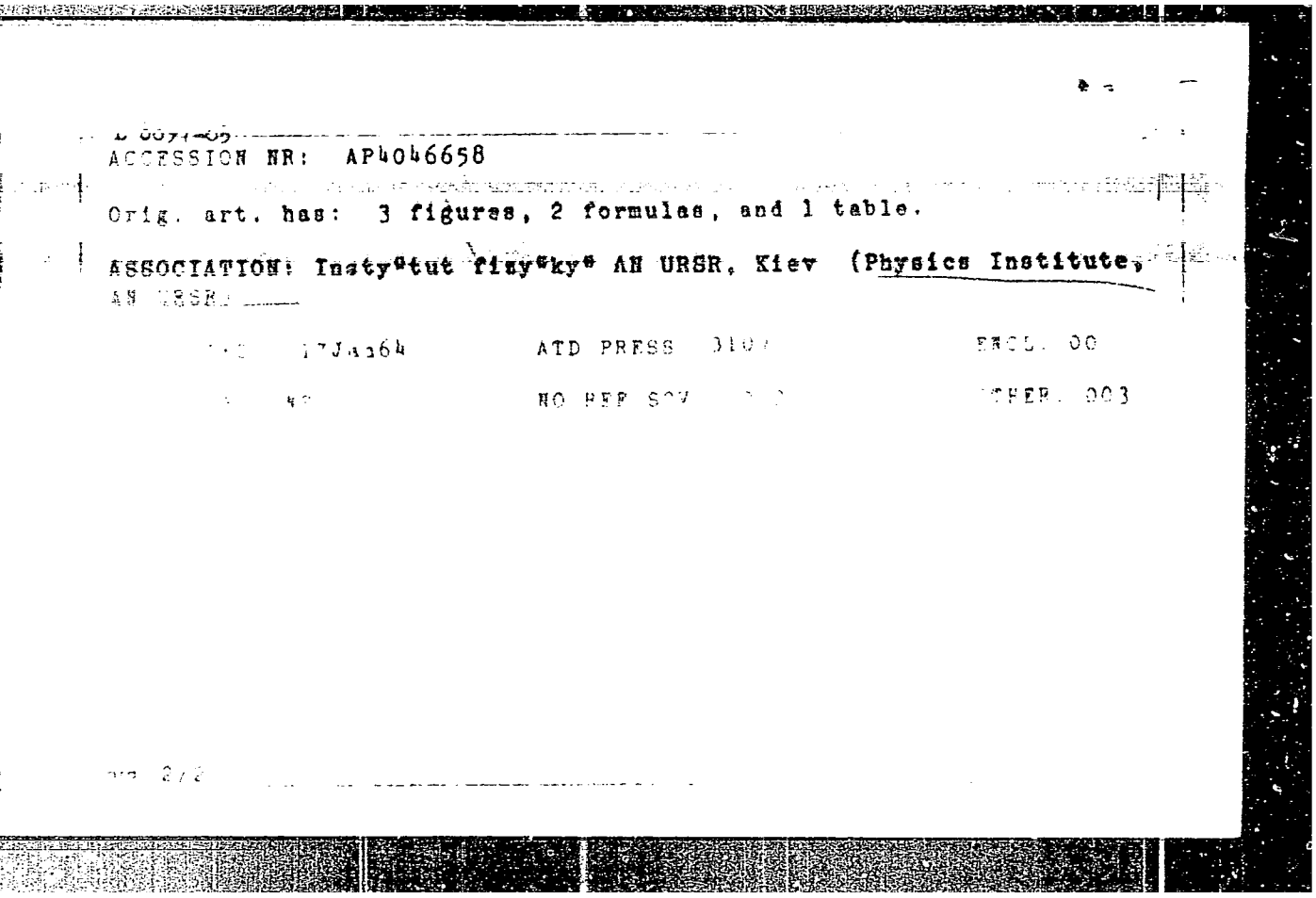
... (Korzh, I. A.) ... Sklyar, N. T.); ... Totskiy, I. A

... Scattering of neutrons with ener... and 800 kev by Mg, Sb, W, and U nuclei

SOURCE: Ukrayinsk'ky*y fizy*chny*y zhurnal, v. 9, no. 9, 1964, 929-932

... TAGS: elastically scattered neutron, neutron angular distribution, neutron scattering, nuclear physical constant

... Measurements of angular distributions are presented for ... with energies of 300 and 500 kev elastically scattered by ... and W nuclei. ... W, and U nuclei and with 800 kev, by ... were calculated from the ... nuclear physical constants ... elastic cross sec... of the angular distributions ... elastic scattering ... the mean value of the cosine ... and σ_{tr}, the trans... the elastic transport cross section ... scattering cross section with allowance made ...



ACCESSION NR: AP4046658

Orig. art. has: 3 figures, 2 formulas, and 1 table.

ASSOCIATION: Instytut fizyky AN URSR, Kiev (Physics Institute, AN URSR)

ATD PRESS 3107

ENCL: 00

NO REF SOV

OTHER: 003

KORZH, I. D.

USSR/Physics — Jul/Aug 48
Testing Techniques

"Determination of Sodium in Chamotte and Clays Using an Automatic Unit," I. D. Korzh, 1 p

"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 4

When evaporating chamotte or clays from the opening of a carbon electrode using a special diluent, e.g., $CaSO_4$, sodium, contained in the chamotte and clay, is fumed intensively. Time required to evaporate the sodium is proportional to its concentration in the specimen. Used this principle to construct automatically operating unit, in which the time that the

53/49T105

USSR/Physics (Contd) — Jul/Aug 48
Testing Techniques

sodium vapors exist in the arc, and hence the sodium concentration in the specimen, is registered by a chronometer connected to a voltmeter needle.

53/49T105

KORZH, L.I.

Efficient cooperation with the veterinary service of Afghanistan. Veterinariia 41 no.10:110-111 O '64.
(MIRA 18:11)

KORZH, M.I.; RAYKHEL'S, Ye.I.; FAL'KO, I.I.

Changes in linear dimensions of piston pins due to the running of the engine. Avt.prom. 28 no.1:41-43 Ja '62. (MIRA 15:2)

1. Khar'kovskiy zavod "Serp i molot" i Khar'kovskiy universitet imeni Gor'kogo.

(Pistons)

S/262/62/000/022/003/007
E073/E435

AUTHORS: Korzh, M.I., Raykhel's, Ye.I., Fal'ko, I.I.

TITLE: On changes in the linear dimensions of piston pins during operation of the engine

PERIODICAL: Referativnyy zhurnal. Otdel'nyy vypusk. Silovyye ustanovki, no.22, 1962, 34, abstract 42.22.200. (Avtomob. prom-st'. no.1, 1962, 41-43)

TEXT: The results are given of investigations of the causes of increase in the linear dimensions of piston pins of the experimental diesel engine СМД-14 (SMD-14) during operation and methods of combating this phenomenon are described. It was established that the increase in the dimensions of the piston pins was due to the presence of a high percentage of austenite (up to 30%) in the case-hardened layer. The austenite-to-martensite transformation during tempering of the piston pins (180 to 240°C) was accompanied by an increase in volume which is the greater the higher the tempering temperature. A decrease of the austenite content to 10% was achieved by changing the conditions of heat-treatment. The components were hardened from the lower limit of the hardening temperature range, about

Card 1/2

On changes in the linear ... S/262/62/000/022/003/007
E073/E435

790°C) and tempering was at 220 to 240°C with a holding time of about 1.5 hours. By means of this heat-treatment the increase in the linear dimensions was reduced from 20 to 10 μ. Subsequent experiments have shown that holding components at -70°C for 4 hours reduces the austenite content of the case-hardened layer to zero and, in this case, there was no increase in the linear dimensions of the piston rings.

[Abstractor's note: Complete translation.]

Card 2/2

KORZH, M.I.

Improving cavitational qualities of diesel water pumps.
Trakt. i sel'khozmash. no.11:11-12 N '65. (MIRA 18:12)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po dvigatelyam.

KORZH, M.I.; VAKHTEL', V.Yu.; SUKHORUKOV, G.A.; KUBATA, M.K.

Improving the work of the cooling system of the SMD-14 engine. Trakt. i sel'khozmash. no.7:14-16 Jl '64. (MIRA 18:7)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po dvigatelyam.

DIDENKO, A.M., inzh.; KORZH, M.I., inzh.; KISEL', P.S., inzh.; KHALFEN, A.Z., inzh.

Cavitation damages in the cylinder sleeves of engines. Mashinostroenie no.3:95-97 My-Je '65. (MIRA 18:6)

KORZH, M.O., inzh. (Khar[illegible]kov).

From Pechora to the Caspian. Nauka i zhyttia 11 no.6:20-22 Je '61.
(MIRA 14:7)
(Caspian Sea—Hydrology) (Pechora River—Regulation)
(Vychegda River—Regulation)

Korzh, M.V.

AUTHOR: Korzh, M.V. 5-6-4/42

TITLE: Paleogeography of the Triassic Period in the Southern Part of the Far East Maritime Region (Paleogeografiya triasovogo perioda v yushnom Primor'ye)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiy, 1957, # 6, pp 57-79 (USSR)

ABSTRACT: The author presents a stratigraphic columnar section of Triassic deposits in the Maritime region of the Far East, compiled on the basis of a critical analysis of the existing stratigraphic schemes and his own observations. Following the scheme proposed by P.N. Kropotkin (Ref. 10) the author distinguishes 8 large structural units in the south-eastern part of the Maritime region: 1. The Khanka tectonic massif; 2. The Suyfun synclinal zone; 3. The Daubikha synclinal zone; 4. The Murav'yev anticlinorium; 5. The Suchan synclinal zone; 6. The main anticlinorium of the Sikhote-Alin'; 7. The main synclinorium of the Sikhote-Alin', and 8. The coastal anticlinal zone.

The anticlinal zones listed are mainly made of considerably dislocated Carboniferous and Permian deposits penetrated with granite intrusions. These zones, subjected to intensive folding and considerable lifting at the end of the Permian period,

Card 1/3

continued their development also in the Mesozoic period. The synclinal zones are filled in with mainly Mesozoic and Cenozoic deposits.

Thus, by the end of the Permian period the southern Maritime region was a folded, strongly dissected mountainous country with a whole system of ranges (anticlinoria) and depressions (synclinal zones) separating them.

The author depicts the conditions of sedimentation during the Lower-, Middle- and Upper-Triassic epochs, gives detailed characteristics of the facial peculiarities of the sediments, and considers the problems of paleogeography which changed considerably in the Triassic period due to numerous transgressions and regressions of the sea.

As to the climate of that period, the author concludes that it was hot and arid during the Lower-Triassic epoch, moderately warm during the Middle-Triassic epoch, and warm and humid during the Upper-Triassic epoch.

The Ussuri basin was connected with the Tethys during the Lower- and Middle-Triassic epochs, which is proved by the

Card 2/3

Korzh, M.V.

20-6-32/48

AUTHOR: Korzh, M.V.

TITLE: On the Problem of the Stratigraphy of the Triassic Deposits of South Primorye (K voprosu o stratigrafii Triasovykh otlozheniy yuzhnogo Primor'ya)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Nr 6, pp. 1169 - 1172 (USSR)

ABSTRACT: Triassic deposits are widely spread here. The marine deposits of the Lower and the Middle Triassic, which are faunally characterized, are to be found south of the mountaineous country Sikhote-Alin and are unknown north of the latitude of Voroshilov. There only Upper Triassic occurs. The following stratigraphy is suggested: LOWER - TRIASSIC - T_1

Indus-stage - T_1

Horizon of basal conglomerates - T_1^a. With this the cross section of Lower Triassic deposits starts everywhere in the South-Pacific region. The conglomerates are deposited transgressively and discordantly on sedimentary-volcanogenic formations of the Upper Palaeozoic: on fresh water-continental Permian sediments, Upper Permian granites. Upper Palaeozoic limestones etc. Meekoceras horizon - T_1^b. The conglomerates are constantly re-

Card 1/4

On the Problem of the Stratigraphy of the Triassic Deposits of South Primorye

placed by a stratum of monotonous sandstones with an ammonite-fauna. Flemingite-horizon - T_1^{1v} . Those are fine-layered clay schists and argillites which lie higher. To the Olenek-stage T_1^{1a} belongs the Subcolumbite-horizon T_1^{2a} , which concludes the cross section of the Lower Triassic at the top. It consists of alternating deposits of dark-gray and black fine-layered sandstones, aleurolites and argillites.

MIDDLE - TRIASSIC - T_2

Anizian stage - T_2^1

Horizon of streaky sandstones and aleurolites. - T_2^{1a}. On the preceding stage are quite concordantly deposited polymyctic gray sandstones and aleurolites with fossils of worm matrices and trails of benthos animals as well as problematic fossils of algae. Horizon of the Arkoz-quartzite-like sandstones.- T_2^{1b}. Those are uniform white and light-gray various grained sandstones. Badly faunally characterized. Ladinsk-(?Ladin)-stage. - T_2^2 . To it belongs the horizon of black argillites and clay schists (Daonella-horizon). - T_2^{2a}. The former gradually passes over into it. This horizon is very steady and widely distributed in

the region. It consists of pyritized rocks with loaf-like lime and marl concretions. The horizon of the light-gray Arkoz sandstones. - T_2^{2b}, concludes the Middle Triassic cross section. It is 160 - 500 m thick and consists of light-gray and white coarse-grained sandstones with badly preserved flora.

UPPER - TRIASSIC - T_3

Karnian stage - T_3^1

Lower Mongugay suite. - T_2^{1a} (probably misprint - it should be T_3 instead of T_2, abstractor's remark). The Upper Triassic cross section begins with carboniferous sediments of this suite of various composed sandstones. Rich thermophilic flora. Lower Monotis suite. - T_3^{1b}. The Mongugay sediments are gradually replaced by the stratum of marine terrigeneous deposits of the above-mentioned suite. Those are on the whole tufaceous polymyctic sandstones and aleurolites, overfilled with fauna-containing, carbonized plant detritus. Norian stage. - T_3^2. To it belongs the Upper Mongugay suite. Consisting of alternating deposits of tufaceous and "Grayvakk"-sandstones, aleurolites, coaly-clay schists and rarely of conglomerates. In the middle

part coal-seams occur and everywhere an abundant fauna, related with the Lower Mongugay suite. 200 m thick. Upper Monotis suite. Its marine deposits conclude the Triassic cross section on the top. They are only limitedly spread in the region and grew mostly in the post Triassic period. The problem of the Rhaetian stage remains unsolved for this region. Examples of the fauna and flora found are given everywhere. There are 6 Slavic references.

ASSOCIATION: Petroleum Institute AN USSR
(Institut nefti Akademii nauk SSSR)

PRESENTED: by N.M. Strakhov, Academician, March 25, 1957

SUBMITTED: March 20, 1957

AVAILABLE: Library of Congress

KOR[illegible]H, M. V., Cand Geol-Min Sci -- (diss) "Petrography of Triassic deposits of southern Primor'ye and paleography of [illegible] period, ~~during which they were formed~~" Mos, 1958. 18 pp (Acad Sci USSR, Inst of Petroleum), 120 copies (KL, 18-58, 96)

KORZH, M.V.

Concretion and concretion formations in Triassic sediments of the southern Maritime Territory. Trudy Inst.nefti 9:143-154 '58. (MIRA 12:4)
(Maritime Territory--Concretions)

KORZH, M. V., Candidate Geolog-Mineralog Sci (diss) -- "The petrography of the Triassic deposits of southern Primor'ye and the paleography of the time of their formation". Moscow, 1959. 18 pp (Acad Sci USSR, Inst of Geology and Working of Mineral Fuels), 120 copies (KL, No 24, 1959, 130)

3(5) PHASE I BOOK EXPLOITATION SOV/2251

Korzh, Mikhail Vasil'yevich

Petrografiya triasovykh otlozheniy Yuzhnogo Primor'ya i paleogeografiya vremeni ikh obrazovaniya (Petrography of the Triassic Formations of South Primor'ye and the Paleogeography at the Time of Their Development) Moscow, Izd-vo AN SSSR, 1959. 82 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut nefti. Laboratoriya paleogeografii.

Ed.: S.G. Sarkisyan; Ed. of Publishing House: G.A. Shapovalova; Tech. Ed.: [no initial] Kuz'min and Ye.V. Makuni.

PURPOSE: This monograph is intended for geologists interested in the lithology, petrography, and stratigraphy of Southern Primor'ye.

COVERAGE: This work describes the lithological characteristics of cross-sections of the Triassic formations of Southern Primor'ye

Card 1/2

KORZH, Mikhail Vasil'yevich; SARKISYAN, S.G., prof., otv.red.; SHAPOVALOVA, G.A., red.izd-va; KUZ'MIN, tekhn.red.; MAKUNI, Ye.V., tekhn.red.

[Petrography of Triassic sediments in the southern Maritime Territory and the paleogeography of the time of its formation] Petrografiia triasovykh otlozhenii IUzhnogo Primor'ia i paleogeografiia vremeni ikh obrazovaniia. Moskva, Izd-vo Akad.nauk SSSR, 1959. 82 p. (MIRA 12:4)

(Maritime Territory--Petrology)
(Maritime Territory--Paleogeography)

KORZH, M.V.

Lithological characteristics of Triassic sediments in the southern Maritime Territory. Trudy DVFAN SSSR.Ser.geol. 6:5-58 '60.
(MIRA 13:11)

1. Institut nefti AN SSSR.
(Maritime territory--Petrology)

KOUL, M. [Cole, M.]; KORZH, N.; KELLER, L.

Probability learning in long training. Vop. psikhol. 11 no.2: 75-78 Mr-Ap '65. (MIRA 18:6)

1. Kafedra psikhologii Moskovskogo gosudarstvennogo universiteta i Indianskogo universiteta, SShA.

KORZH, P. A.

Electric Substations; Electric Insulators and Insulation

Performance of insulators in a strongly polluted 38 KV open substation.
Elek. sta. 23, No. 4, 1952
Inzh.

SO: Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

KORZH, N.A., inzhener.

Inspection of powerful transformers of hydroelectric power stations without the removal of the core. Energetik 1 no.2:4-5 Jl '53. (MLRA 6:8)
(Electric transformers--Testing)

1. KORZH, M.A.

2. USSR (600)

4. Electric Switchgear

7. Vibration of the main switchboard panel, Eng. Elek.sta. 24 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

AUTHOR: Korzh, N.A., Engineer SOV/91-58-12-14/20

TITLE: Deep-Placed Ground Electrodes (Glubinnyye zazemliteli)

PERIODICAL: Energetik, 1958, Nr 12, pp 22-23 (USSR)

ABSTRACT: In constructing a substation (110/35/6 kV, capacity 2 x 15,000 kVA) technicians rejected the original design, according to which a poorly conducting earth layer (1 to 1.5 m deep) had first to be removed to give room to 136 standard-type ground electrodes, and adopted another system. With the help of a mining drill they rammed sixteen 8-m long, 89 mm in diameter electrodes into the well-conducting layer of clay at a depth of 6 to 8 meters. The upper ends of the electrodes were at a depth of 0.8 m and were interconnected through a trench by a 40 x 4 mm steel strap. The advantages of the new system are: stability of the resistance to the current flow-off; constant humidity; good conductivity of the ground; 70 % lower construction costs. The total resistance to flow-off of the grounding network consisting of 10 electrodes was 0.18 ohm. The editor's note reads that -

Card 1/2

to ensure potential balance throughout the premises of the substation, it is necessary to lay a steel-band network everywhere the substation's equipment is installed. There is 1 profile.

KORZH, N.A., inzh.

Grounding devices of the electrical systems of hydraulic engineering structures. Elek. sta. 33 no.4:35-39 Ap '62. (MIRA 15:7)
(Hydroelectric power stations)
(Electric currents--Grounding)

KORZH, N.A., inzh.

Concerning the repudiation of the necessity to install artificial grounding systems in hydroelectric power stations. Energetik 10 no.6:25-27 Je '62. (MIRA 16:3)
(Hydroelectric power stations)
(Electric currents—Grounding)

KORZH, N.A., inzh.

"Electrical equipment of electric power plants and substations" by L.N. Baptidanova, V.I. Tarasova. Reviewed by N.A. Korzh. Izv.vys.ucheb.zav.;energ. 6 no.1:119-122 Ja '63. (MIRA 16:2)

1. Ukrainskiy zaochnyy politekhnicheskiy institut.
(Electric power plants—Electric equipment)
(Electric substations—Electric equipment)
(Baptidanova, L.N.) (Tarasova, V.I.)

KORZH, N.A., inzh.

Concerning V.P. Brimerberg's article "Use of the framework of a hydroelectric power station as a grounding system." Elek. sta. 34 no.6:87-88 Je '63. (MIRA 16:9)
(Hydroelectric power stations)
(Electric currents--Grounding)
(Brimerberg, V.P.)

PRATUSEVICH, Yu.M.; MEL'NICHUK, P.V.; ALEKSEYEVA, L.A.; KORZH, N.N.

Study of the state of the electrical activity of the brain in school children before and after school work. Pediatriia 38 no.6: 77-81 Je '60. (MIRA 13:12)

(BRAIN)

PRATUSEVICH, Yu.M., kand.med.nauk; KORZH, N.N.

Changes in the electrical activity of the brain in children after school lessons. Gig.i san. 26 no.1:44-50 Ja '61. (MIRA 14:6)

1. Iz fiziologicheskoy laboratorii kafedry pediatrii TSentral'nogo instituta usovershenstvovaniya vrachey.
(ELECTROENCEPHALOGRAPHY) (SCHOOL CHILDREN)
(FATIGUE, MENTAL)

KORZH, N.N.

Aftereffect in determining the absolute threshold of the sensitivity of visual analyzer. Vop. psikhol. 9 no.6:85-92 N-D '63.
(MIRA 17:4)

1. Kafedra psikhologii Moskovskogo gosudarstvennogo universiteta.

L 06373-67 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/DJ/WH

ACC NR: AP6027488 (N) SOURCE CODE: UR/0418/66/000/003/0062/0063

AUTHOR: Sagarda, A. A. (Engineer); Goretskiy, M. Ye. (Engineer); Korzh, N. Ya. (Engineer)

ORG: None

TITLE: Use of synthetic diamonds for precision finishing bearing rings made from hard steel

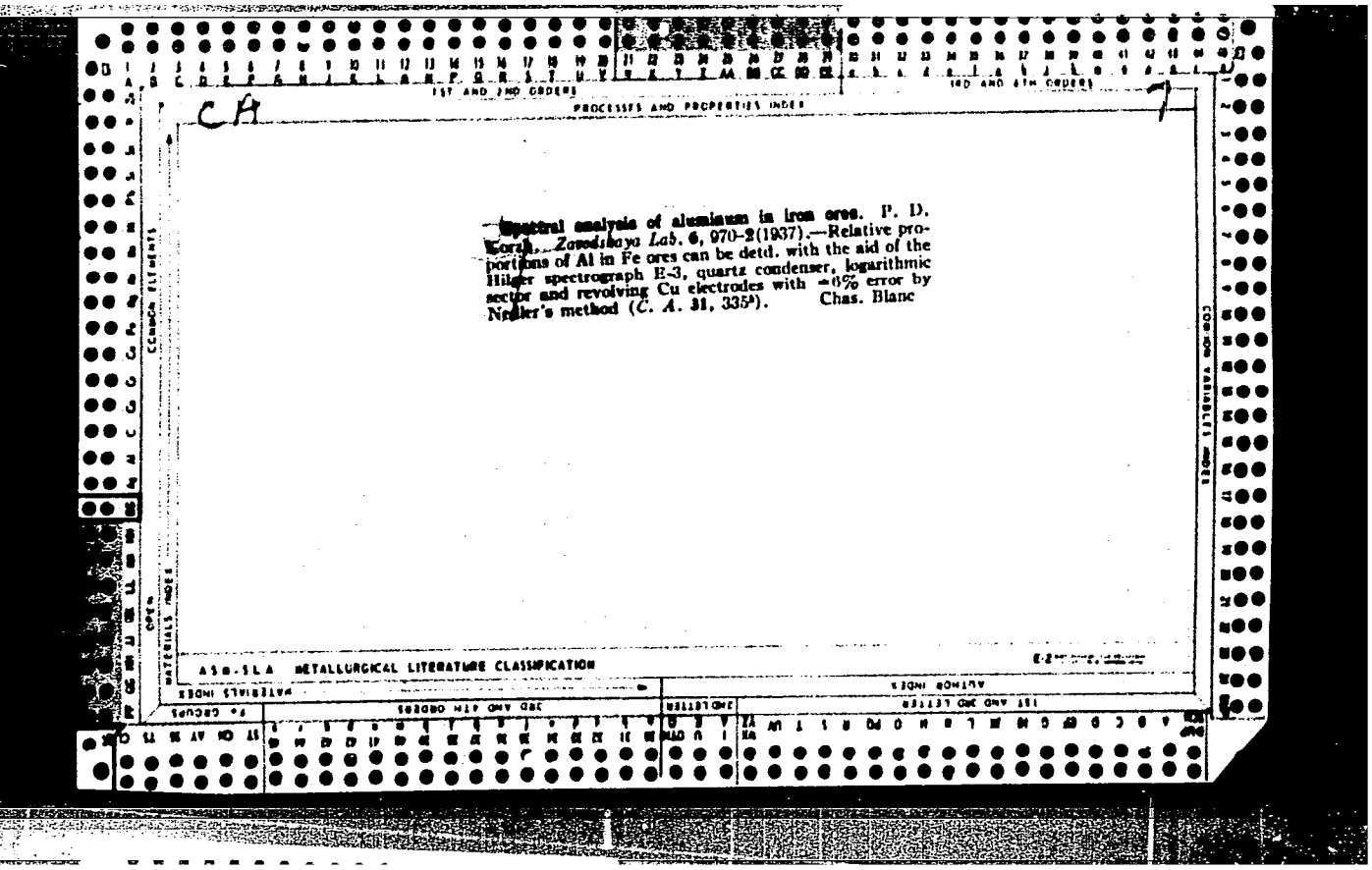
SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 3, 1966, 62-63

TOPIC TAGS: diamond, precision finishing, bearing steel, mechanical metal removal, BEARING RACE

ABSTRACT: The authors compare the use of emery cloth with ASM28 diamond paste to diamond blocks for precision finishing EI347 heat resistant steel bearing races. The emery cloth method has many disadvantages: it does not remove enough metal, does not give a clean surface and uses one carat of diamonds for ten rings. Diamond block finishing does not have these disadvantages. It produces clean surfaces, removes 8 to 10 μ of metal, produces a true surface within ±1 μ and reduces diamond consumption by a factor of 5-6. All polishing was carried out on machine tools produced by the Fourth State Bearing Plant at ring rotations of 50-70 m/min, 700-800 block vibrations at a block to machined surface pressure of 10-16 kg cm^2 and a 3-5 mm vibration amplitude. A table is given for tests using both methods. The results show that the diamond block method is superior. Orig. art. has: 1 table.

SUB CODE: 13/ SUBM DATE: None

Card 1/1 UDC: 621.923.5

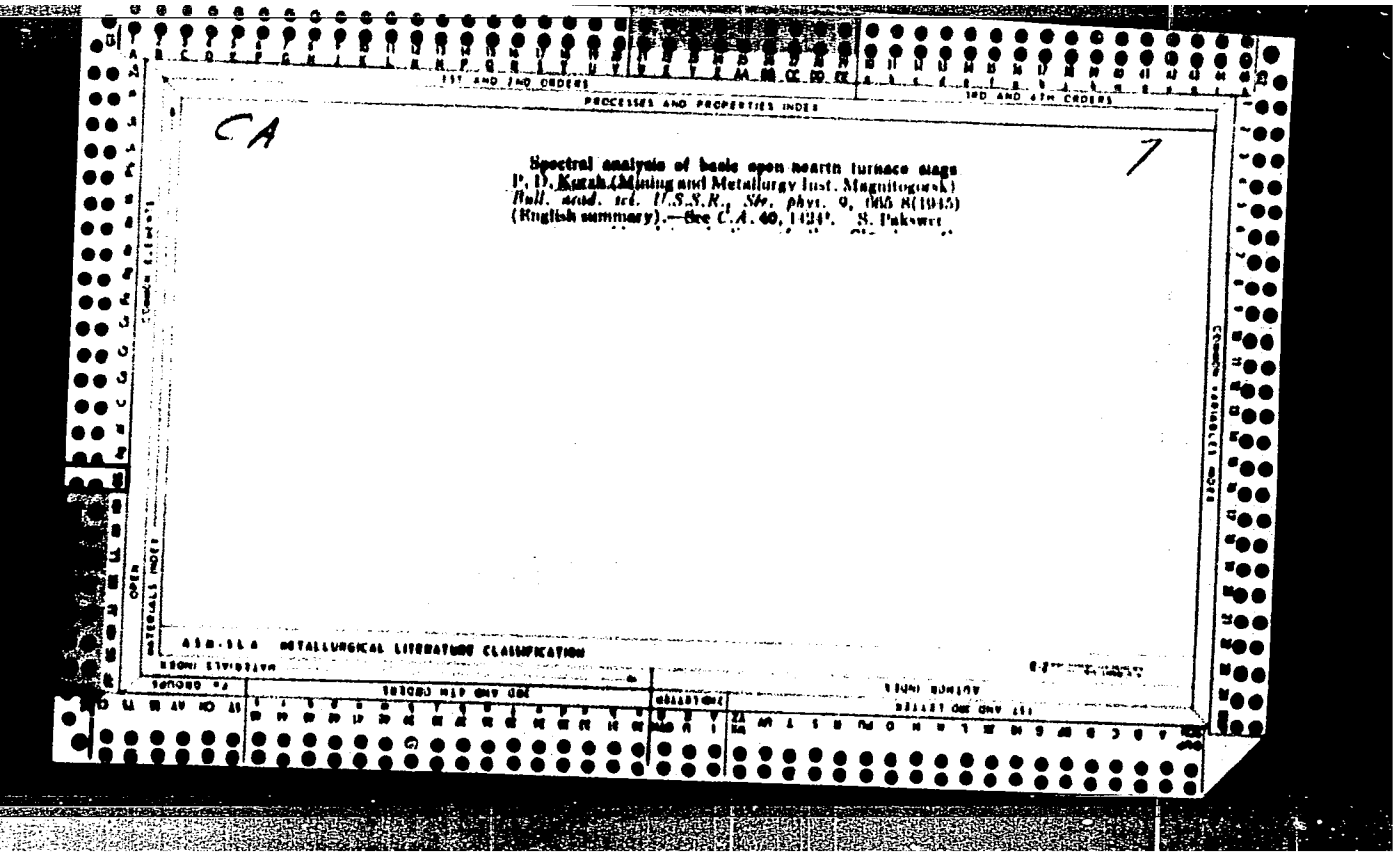


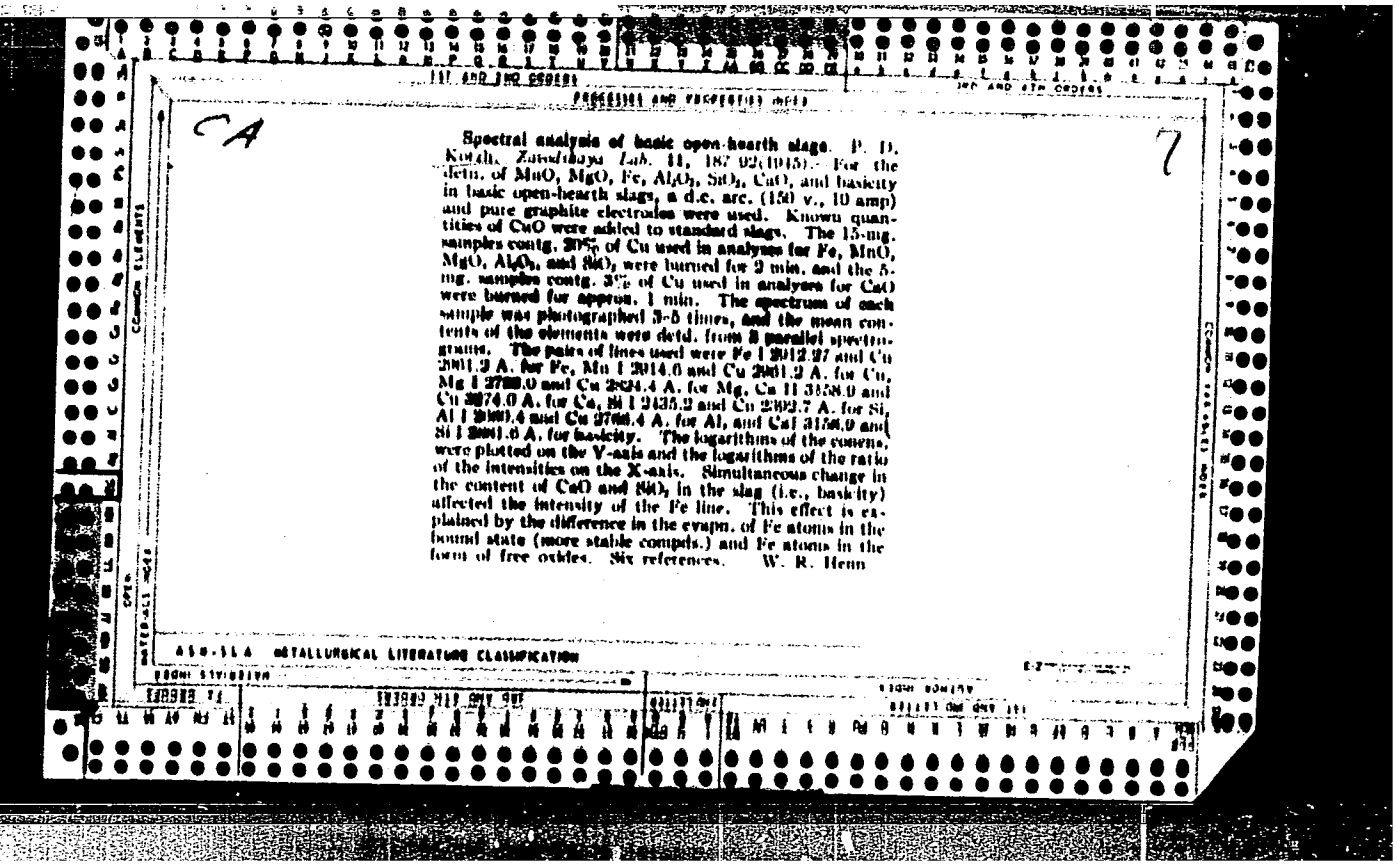
CA

PROCESSES AND PROPERTIES INDEX

Spectral analysis of aluminum in iron ores. P. D. Korab. *Zavodskaya Lab.* 6, 970–2(1937).—Relative proportions of Al in Fe ores can be detd. with the aid of the Hilger spectrograph E-3, quartz condenser, logarithmic sector and revolving Cu electrodes with ~6% error by Nedler's method (*C. A.* 31, 335⁵). Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



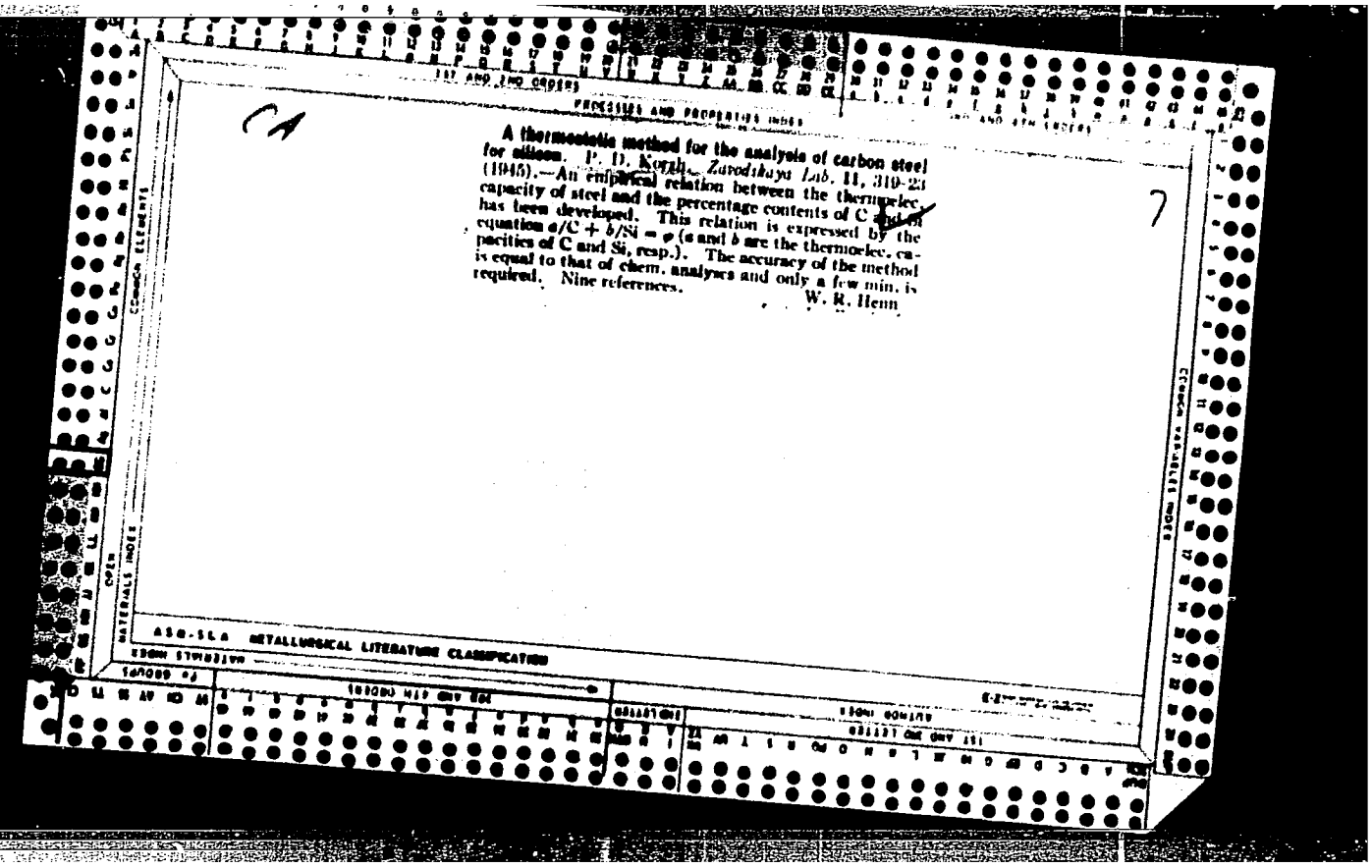


CA

7

Spectral analysis of basic open-hearth slags. P. D. Kozlik, *Zavodskaya Lab.* 11, 187-92(1945).— For the detn. of MnO, MgO, Fe, Al_2O_3, SiO_2, CaO, and basicity in basic open-hearth slags, a d.c. arc. (15) v., 10 amp) and pure graphite electrodes were used. Known quantities of CuO were added to standard slags. The 15-mg. samples contg. 20% of Cu used in analyses for Fe, MnO, MgO, Al_2O_3, and SiO_2, were burned for 2 min. and the 5-mg. samples contg. 3% of Cu used in analyses for CaO were burned for approx. 1 min. The spectrum of each sample was photographed 3-5 times, and the mean contents of the elements were detd. from 3 parallel spectrograms. The pairs of lines used were Fe I 2012.27 and Cu 2001.2 A. for Fe, Mn I 2914.6 and Cu 2001.2 A. for Cu, Mg I 2782.0 and Cu 2824.4 A. for Mg, Ca II 3158.9 and Cu 3274.0 A. for Ca, Si I 2435.2 and Cu 2392.7 A. for Si, Al I 2660.4 and Cu 2766.4 A. for Al, and CaF 3158.9 and Si I 2881.6 A. for basicity. The logarithms of the concns. were plotted on the Y-axis and the logarithms of the ratio of the intensities on the X-axis. Simultaneous change in the content of CaO and SiO_2 in the slag (i.e., basicity) affected the intensity of the Fe line. This effect is explained by the difference in the evapn. of Fe atoms in the bound state (more stable compds.) and Fe atoms in the form of free oxides. Six references. W. R. Henn

A50-51A METALLURGICAL LITERATURE CLASSIFICATION



A thermoelectric method for the analysis of carbon steel for silicon. P. D. Kozlik. *Zavodskaya Lab.* 11, 319-23 (1945).—An empirical relation between the thermoelec. capacity of steel and the percentage contents of C and Si has been developed. This relation is expressed by the equation $a/C + b/Si = \varphi$ (a and b are the thermoelec. capacities of C and Si, resp.). The accuracy of the method is equal to that of chem. analyses and only a few min. is required. Nine references.

W. R. Henn

1ST AND 2ND ORDERS

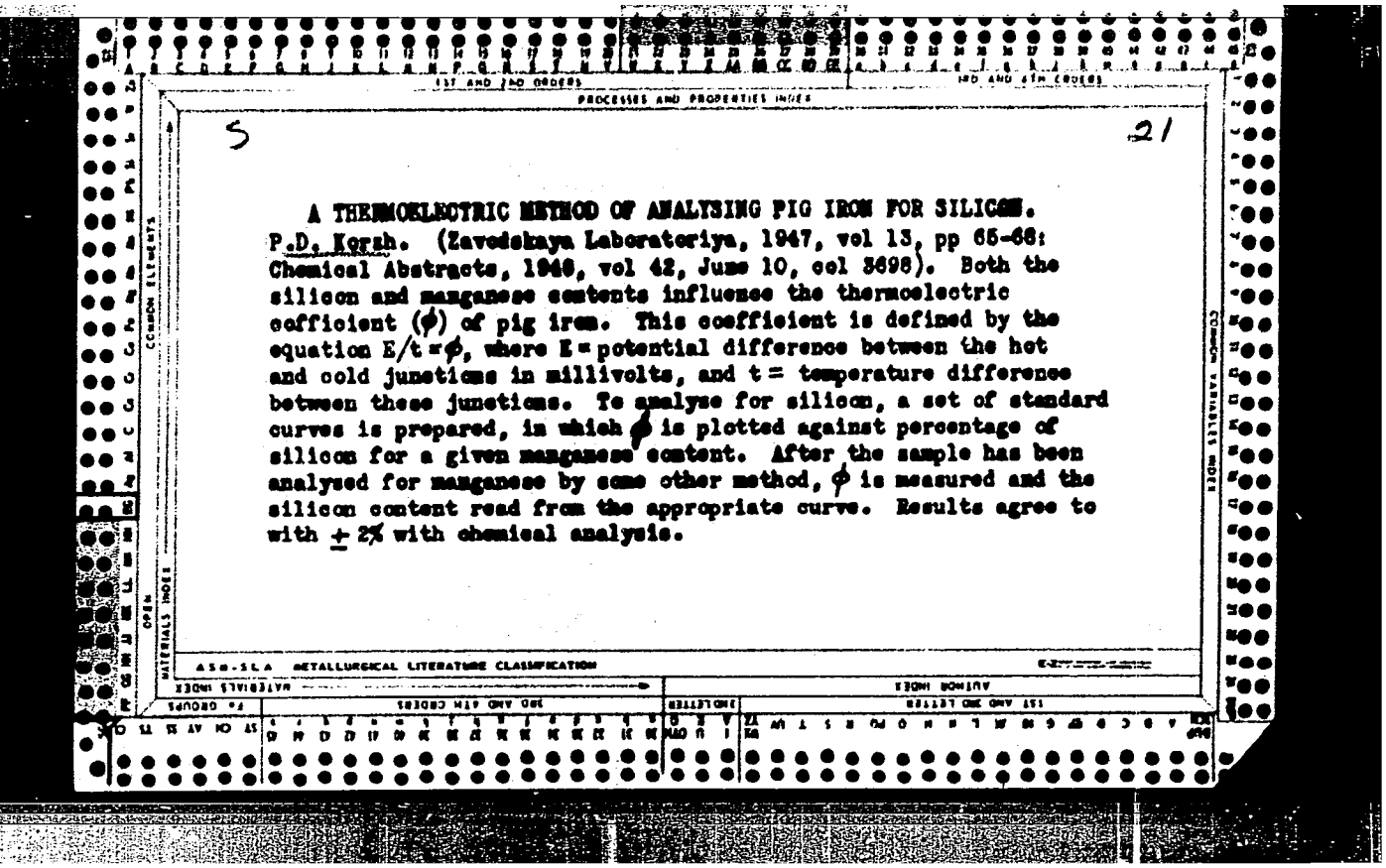
PROCESSES AND PROPERTIES INDEX

CA

7

A thermoelectric method for the analysis of carbon steel for silicon. P. D. Korzh (Magnitogorsk Metallurgical Inst.). *Zavodskaya Lab.* 11, 1140 (1945); cf. C.A. 40, 3366[4]. —A method is described for the detn. by means of values given in tables the content of Si in steel from three measurements of the thermal e.m.f. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



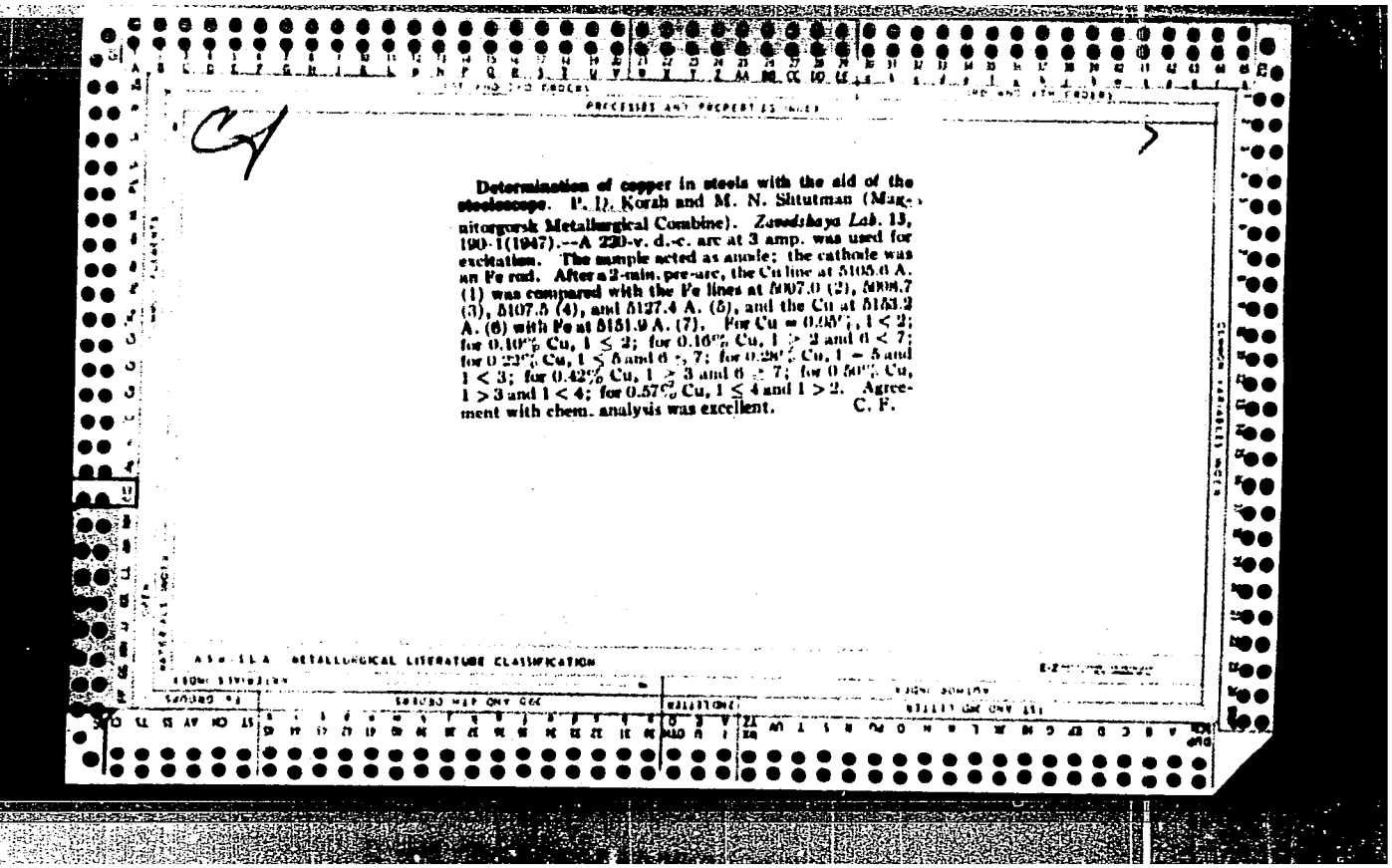
PROCESSES AND PROPERTIES INDEX

5

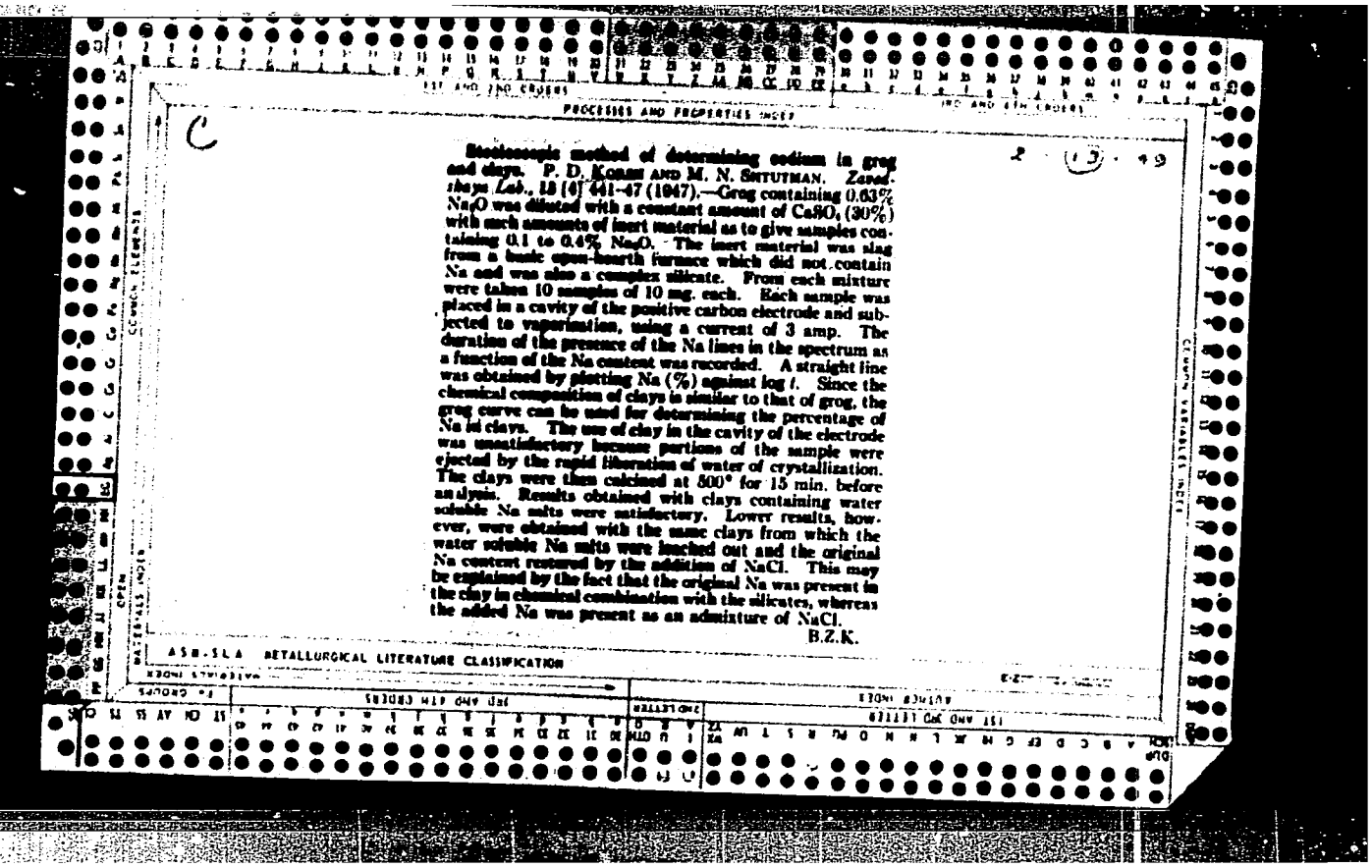
21

A THERMOELECTRIC METHOD OF ANALYSING PIG IRON FOR SILICON.
P.D. Korsh. (Zavodskaya Laboratoriya, 1947, vol 13, pp 65-66: Chemical Abstracts, 1948, vol 42, June 10, col 3698). Both the silicon and manganese contents influence the thermoelectric coefficient (ϕ) of pig iron. This coefficient is defined by the equation $E/t = \phi$, where E = potential difference between the hot and cold junctions in millivolts, and t = temperature difference between these junctions. To analyse for silicon, a set of standard curves is prepared, in which ϕ is plotted against percentage of silicon for a given manganese content. After the sample has been analysed for manganese by some other method, ϕ is measured and the silicon content read from the appropriate curve. Results agree to with $\pm$ 2% with chemical analysis.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Determination of copper in steels with the aid of the steeloscope. P. I. Korab and M. N. Shtutman (Magnitogorsk Metallurgical Combine). *Zavodskaya Lab.* 13, 190-1(1947).--A 220-v. d.-c. arc at 3 amp. was used for excitation. The sample acted as anode; the cathode was an Fe rod. After a 2-min. pre-arc, the Cu line at 5105.6 A. (1) was compared with the Fe lines at 5007.0 (2), 5008.7 (3), 5107.5 (4), and 5127.4 A. (5), and the Cu at 5153.2 A. (6) with Fe at 5151.9 A. (7). For Cu = 0.05%, $1 \leq 2$; for 0.10% Cu, $1 \leq 2$; for 0.16% Cu, $1 > 2$ and $6 < 7$; for 0.22% Cu, $1 \leq 5$ and $6 > 7$; for 0.28% Cu, $1 = 5$ and $1 < 3$; for 0.42% Cu, $1 \geq 3$ and $6 > 7$; for 0.50% Cu, $1 > 3$ and $1 < 4$; for 0.57% Cu, $1 \leq 4$ and $1 > 2$. Agreement with chem. analysis was excellent. C. F.



Stoichiometric method of determining sodium in grog and clays. P. D. KONAEV AND M. N. SHTUTMAN. *Zavod. Lab.*, 13 [4] 441-47 (1947).—Grog containing 0.63% Na_2O was diluted with a constant amount of $CaSO_4$ (30%) with such amounts of inert material as to give samples containing 0.1 to 0.4% Na_2O. The inert material was slag from a basic open-hearth furnace which did not contain Na and was also a complex silicate. From each mixture were taken 10 samples of 10 mg. each. Each sample was placed in a cavity of the positive carbon electrode and subjected to vaporization, using a current of 3 amp. The duration of the presence of the Na lines in the spectrum as a function of the Na content was recorded. A straight line was obtained by plotting Na (%) against log *t*. Since the chemical composition of clays is similar to that of grog, the grog curve can be used for determining the percentage of Na in clays. The use of clay in the cavity of the electrode was unsatisfactory because portions of the sample were ejected by the rapid liberation of water of crystallization. The clays were then calcined at 800° for 15 min. before analysis. Results obtained with clays containing water soluble Na salts were satisfactory. Lower results, however, were obtained with the same clays from which the water soluble Na salts were leached out and the original Na content restored by the addition of NaCl. This may be explained by the fact that the original Na was present in the clay in chemical combination with the silicates, whereas the added Na was present as an admixture of NaCl.

B.Z.K.

KORZH, P. D.

PA 4/49T9

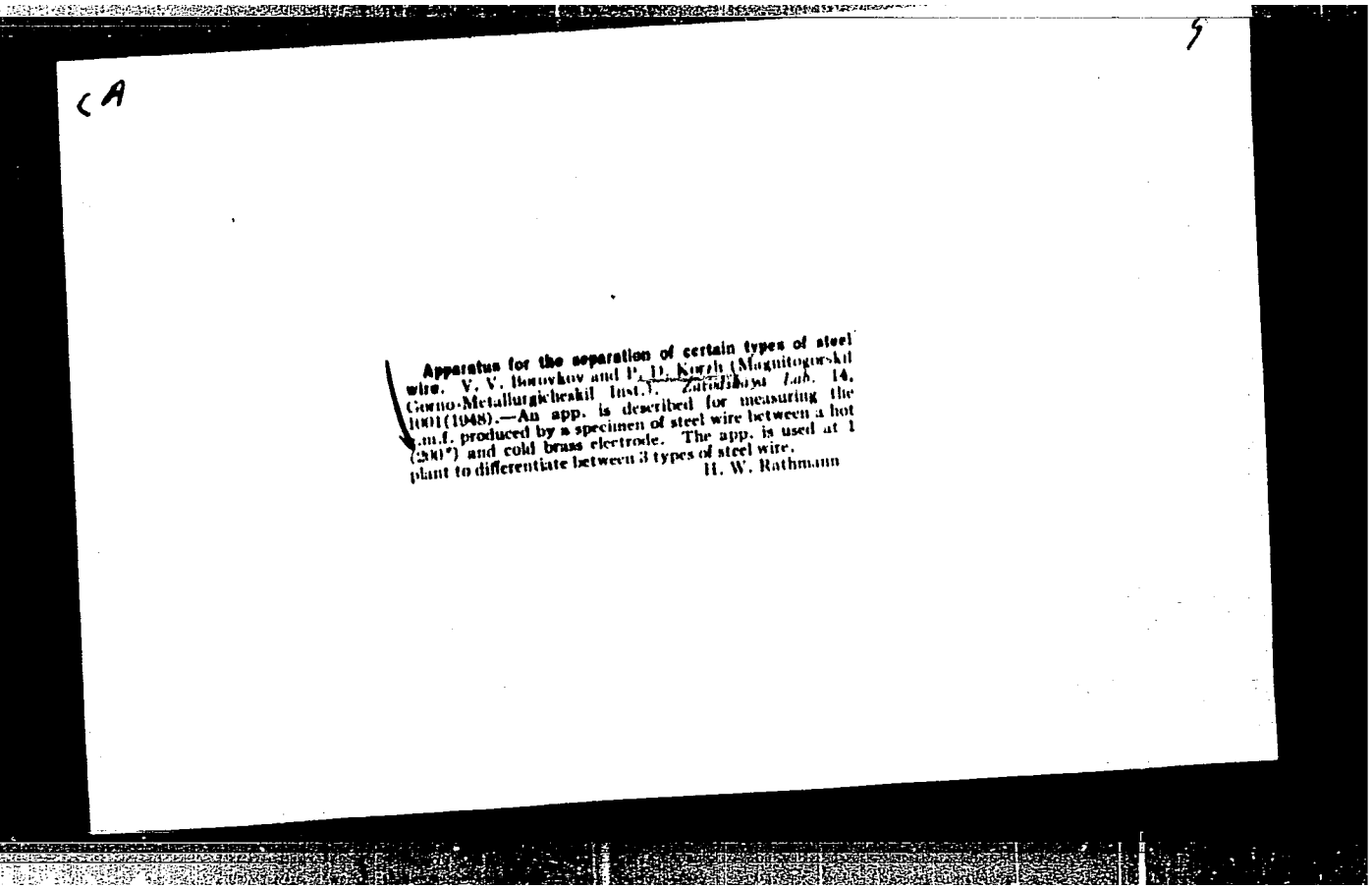
USSR/Chemistry-Iron Alloys, Silicon Determination in Chemistry-Analysis — Feb 48

"Thermoelectric Method of Classifying Ferrosilicons," P. D. Korzh, Magnitogorsk Mining and Metal Inst, 3½ pp

"Zavod Lab" Vol XIV, No 2

Describes special self-contained apparatus for determining thermoelectric EMF of ferrosilicon specimens as a method for estimating silicon content. Method was checked by analysis in factory laboratory.

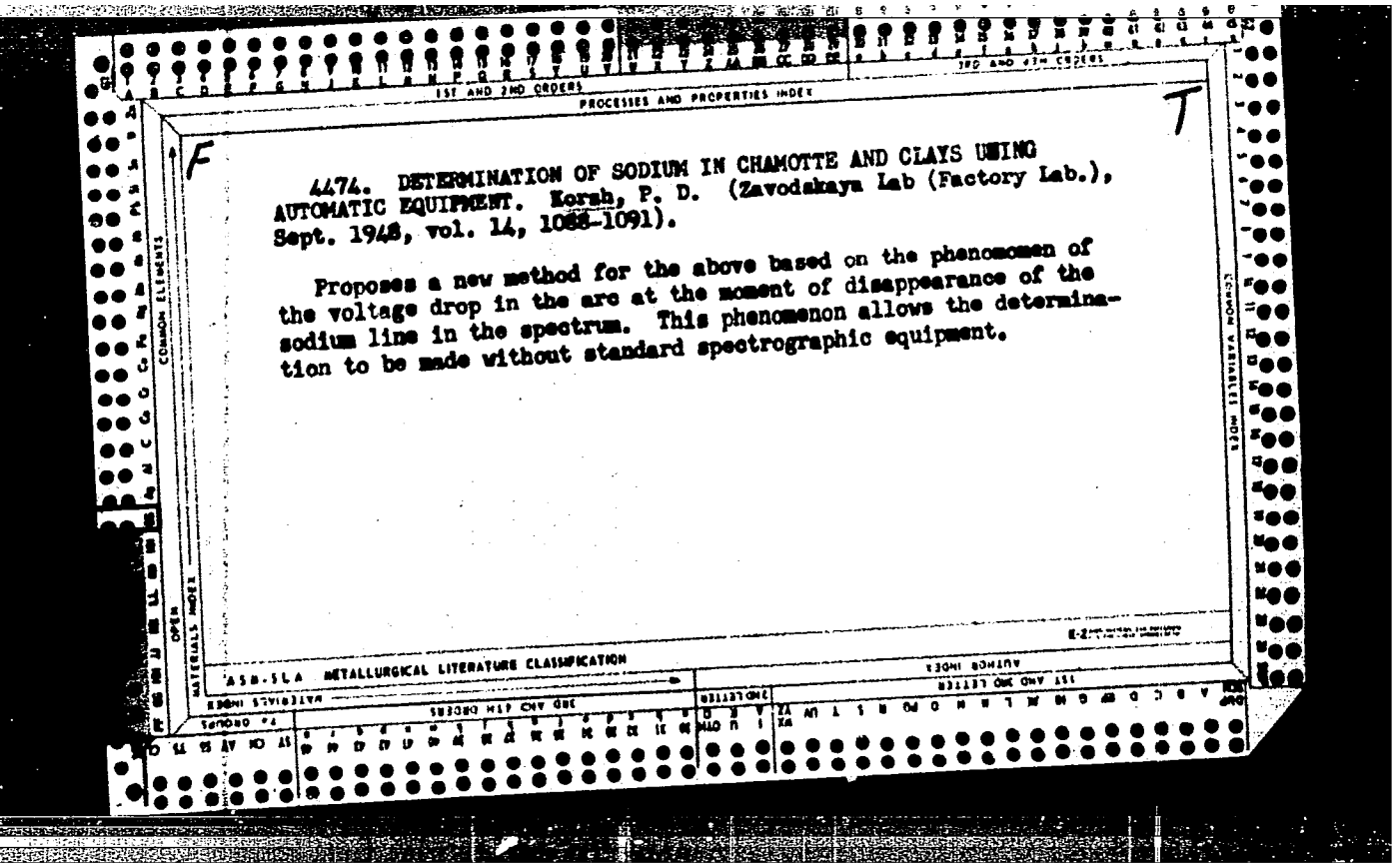
4/49T9



CA

9

Apparatus for the separation of certain types of steel wire. V. V. Borovkov and P. D. Kuzyk (Magnitogorskii Gorno-Metallurgicheskii Inst.). *Zavodskaya Lab.* 14, 1001 (1948).—An app. is described for measuring the e.m.f. produced by a specimen of steel wire between a hot (250°) and cold brass electrode. The app. is used at a plant to differentiate between 3 types of steel wire.
H. W. Rathmann



4474. DETERMINATION OF SODIUM IN CHAMOTTE AND CLAYS USING AUTOMATIC EQUIPMENT. Korsh, P. D. (Zavodskaya Lab (Factory Lab.), Sept. 1948, vol. 14, 1088-1091).

Proposes a new method for the above based on the phenomomen of the voltage drop in the arc at the moment of disappearance of the sodium line in the spectrum. This phenomenon allows the determination to be made without standard spectrographic equipment.

CA

7

Spectral determination of chromium in ferrochrome. A. V. Koslova and P. D. Korzh (Magnitogorsk Mining Met. Inst.). *Zavodskaya Lab.* 14, 1065–7(1948).—The sample was prepd. and excited by the Sventitskii transfer technique (*C.A.* 42, 8695a), and the concn. of Cr detd. by persistance of the 5304-A. group of Cr lines in the analytical spark discharge. The amt. of material transferred during the transfer spark discharge depends on the length of this discharge, but not on the elec. parameters of the circuit.
Cyrus Feldman

KORZH, P.D.

26848: KORZH, P.D., KOZLOVA, A.V.- Spektral'nyy metod analiza nekotorykh ferrosplavov na kremniy i khrom. Zavodskaya laboratoriya, 1949, No. 8, s. 937-39.

SO: Letopis'Zhurnal'nykh Statey, Vol. 36, 1949.

CA

7

Thermoelectric method of silicon determination in some ferroalloys. P. D. Kursh (Magnitogorsk Mining Metallurgical Inst.). *Zavodskaya Lab.* 15, 170-3(1949).—The thermal e.m.f. (I) is detd. for various Fe alloys in contact with nichrome. The percentage Si can be detd. from a curve of I vs. compn. which is obtained from curves of I vs. temp. for standards of known Si content. Comparison between chem. and I detn. of Si for 37 Fe alloys shows an av. relative deviation in Si content of 3.5% for ferrosilicon and 3% for silicomanganese. Curves of I vs. temp. are given for 8.1 and 14.8% Si in ferrosilicon, 0.43 and 2.58% Si in ferromanganese, and 8.4 and 19.2% Si in silicomanganese. Curves of I vs. % Si are given at 825°.

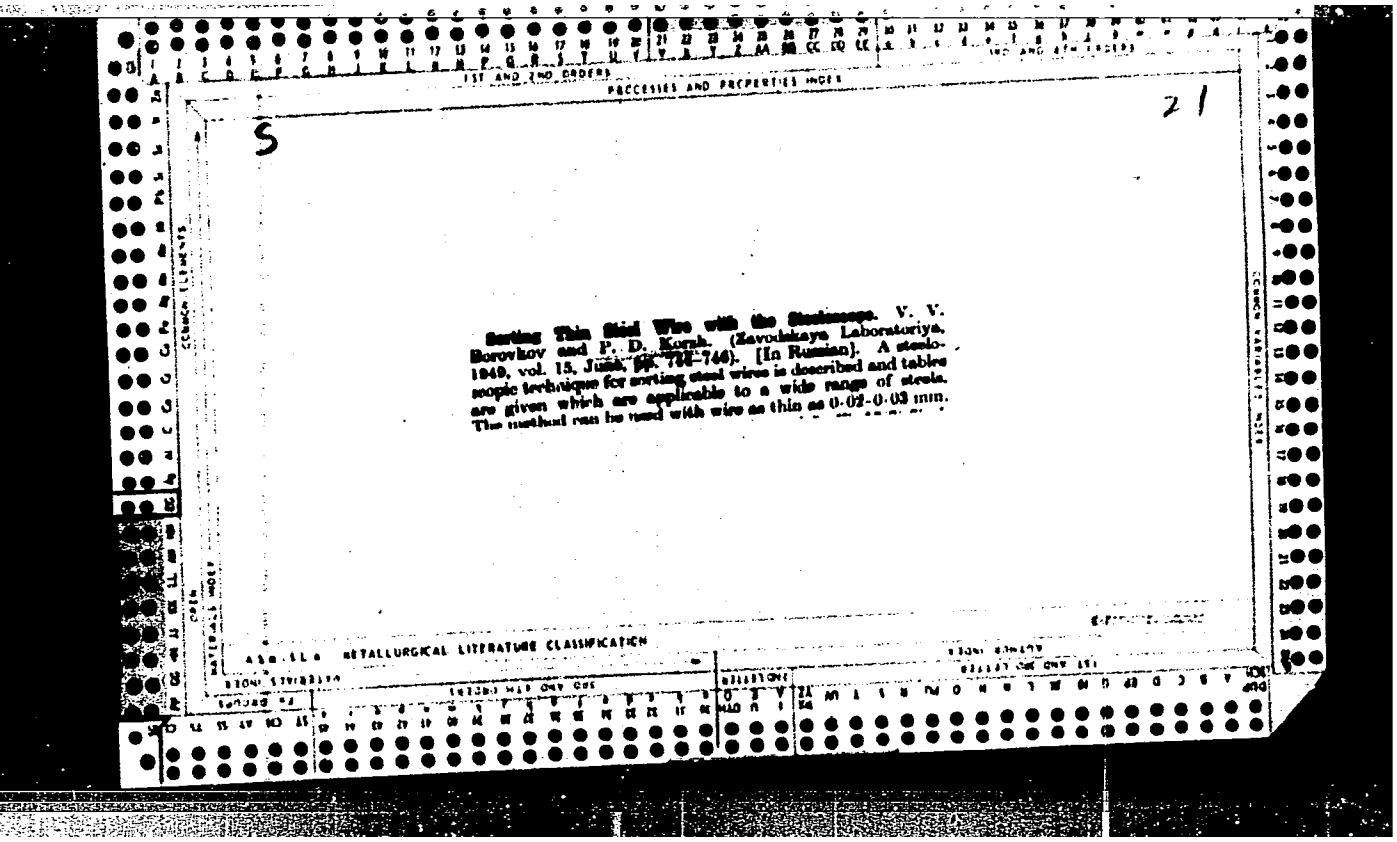
M. J. Sienko

BCS

Testing 4/1950

1168. The visual method of spectral analysis by the relative intensity of the lines of the elements analysed in two specimens.—P. D. KORIN (*Zavod. Lab.*, **15**, 301, 1949). In all modern methods of quantitative spectral analysis the element is determined by comparison of the intensity of lines of the analysed element with those of a standard element in the same specimen. For this the lines are matched so that changes in the conditions used in producing the spectrum, evaporation of the sample and observation influence both comparison lines equally. The choice of such lines sometimes presents considerable difficulties, especially when there are only a few lines in the spectrum. The question of the selection of analytical pairs is eliminated if the content of the element analysed is determined according to the relative intensity of one and the same spectral line of this element, both in the spectrum of the sample and of the standard. In this method 2 series sparks fed from the same generator are used for producing 2 spectra. Light from both sparks illuminates the slit (by means of a special optical device) so that 2 spectra, displaced in height, are obtained. The photometry is carried out by means of a nicol placed in the ocular of the spectroscope. However, the complexity of the optical device in this method (3 nicols, biprism, lenses, etc.) renders it impractical. The following is a simpler method for producing 2 spectra for photometry. The normal slit is replaced by a fine reflecting cylindrical rod, the apparent focus of which gives a

thin luminous line. Two light sources are placed on each side of the apparatus so that the superimposed spectra obtained become slightly displaced along the wave-length axis. Placing the standard sample in one source and the sample to be analysed in the other, the same line of the element, being analysed in the 2 different samples, can be measured photometrically. This replacement of the slit by a cylindrical rod has the following disadvantages. When apparatus of average dispersion is used, the displacement of the spectra along the wave-length axis often causes super-position of the selected line upon other lines of both spectra. The preparation of the reflecting rod is difficult. The defects described can be eliminated in the following way. Two totally internally reflecting prisms are inserted, one upon the other, close to the slit. The prisms are placed so that their lateral faces are at right angles and are directed towards the slit. Placing the 2 sources of light in front of the other lateral faces in the focal plane of the spectrograph yields 2 spectra one above the other. If all the other conditions are the same, the intensity of the lines in both spectra will be proportional to the relative concentrations of the element and inversely proportional to the square of the distance of the light source from the slit. A formula for photometric calculations is given. (3 figs., 3 tables.)

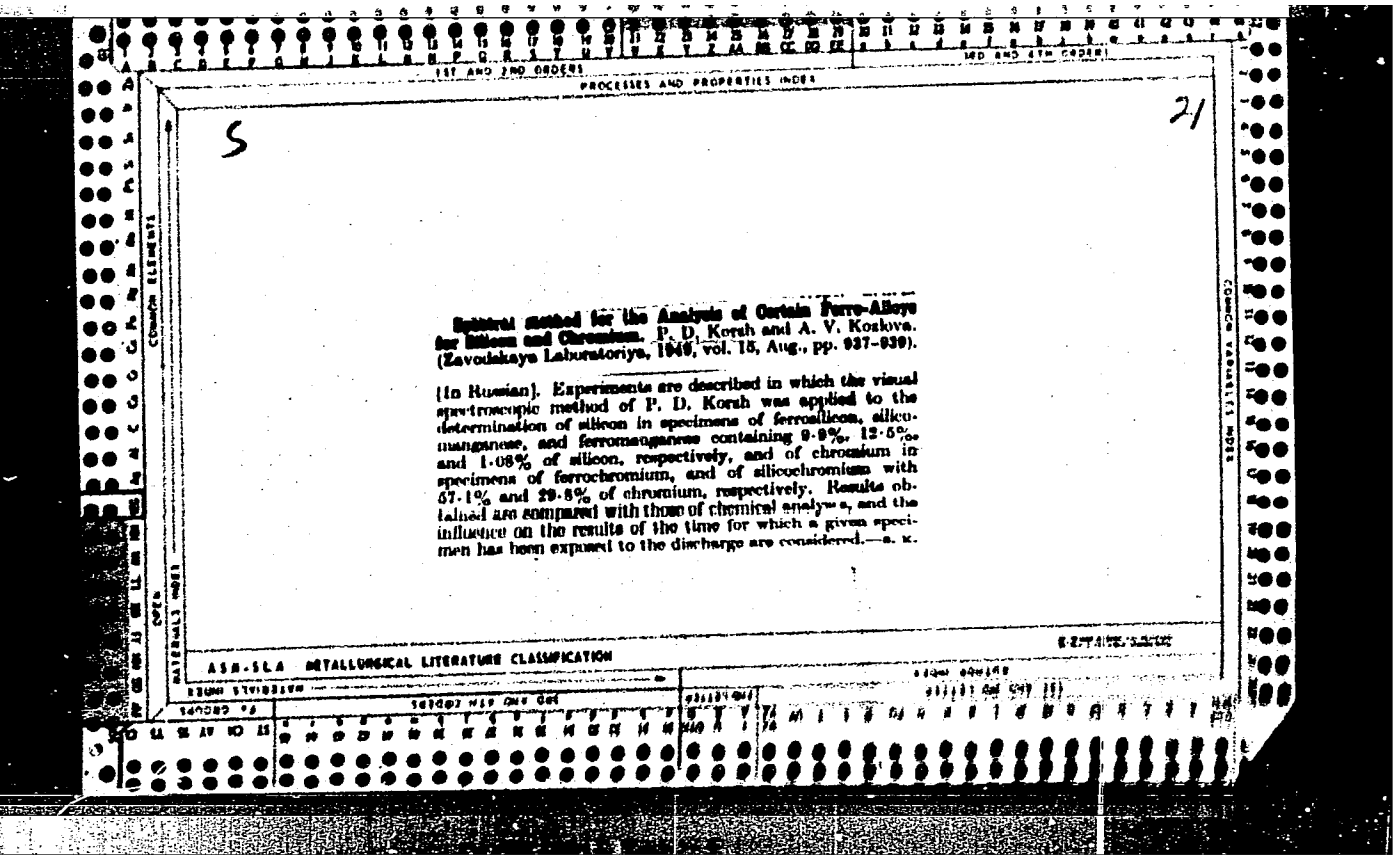


S

21

Sorting Thin Steel Wire with the Stereoscope. V. V. Borovkov and P. D. Kurpa. (Zavodskaya Laboratoriya, 1949, vol. 15, June, pp. 744–746). [In Russian]. A stereoscopic technique for sorting steel wires is described and tables are given which are applicable to a wide range of steels. The method can be used with wire as thin as 0·02–0·03 mm.

A5a-11.8 METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

S

21

Spectral method for the Analysis of Certain Ferro-Alloys for Silicon and Chromium. P. D. Korsh and A. V. Koskova. (Zavodskaya Laboratoriya, 1949, vol. 15, Aug., pp. 937–939).

[In Russian]. Experiments are described in which the visual spectroscopic method of P. D. Korsh was applied to the determination of silicon in specimens of ferrosilicon, silicomanganese, and ferromanganese containing 9·9%, 12·5%, and 1·08% of silicon, respectively, and of chromium in specimens of ferrochromium, and of silicochromium with 57·1% and 29·8% of chromium, respectively. Results obtained are compared with those of chemical analyses, and the influence on the results of the time for which a given specimen has been exposed to the discharge are considered.—a. k.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR/Electricity - Arc Discharge Feb 52

"Process of Oxidation and Transfer, Occurring in Metallic Electrodes During a DC Arc Discharge," V. V. Borovkov, P. D. Korzh

"Zhur Tekh Fiz" Vol XXII, No 2, pp 227-237

Variation in spectral intensity and relative line intensity proves irregular exchange of materials between electrodes during arc discharge. V. F. Smirnov("Zhur Tekh Fiz" VII, 15 1937) V. K. Prokof'yev ("Iz Ak Nauk USSR, Ser Fiz" XII, 4 1948) and L. N. Filimonov ("Zavod Lab, XV, 6, 1947) considered materials transferred from cathode to anode. Authors

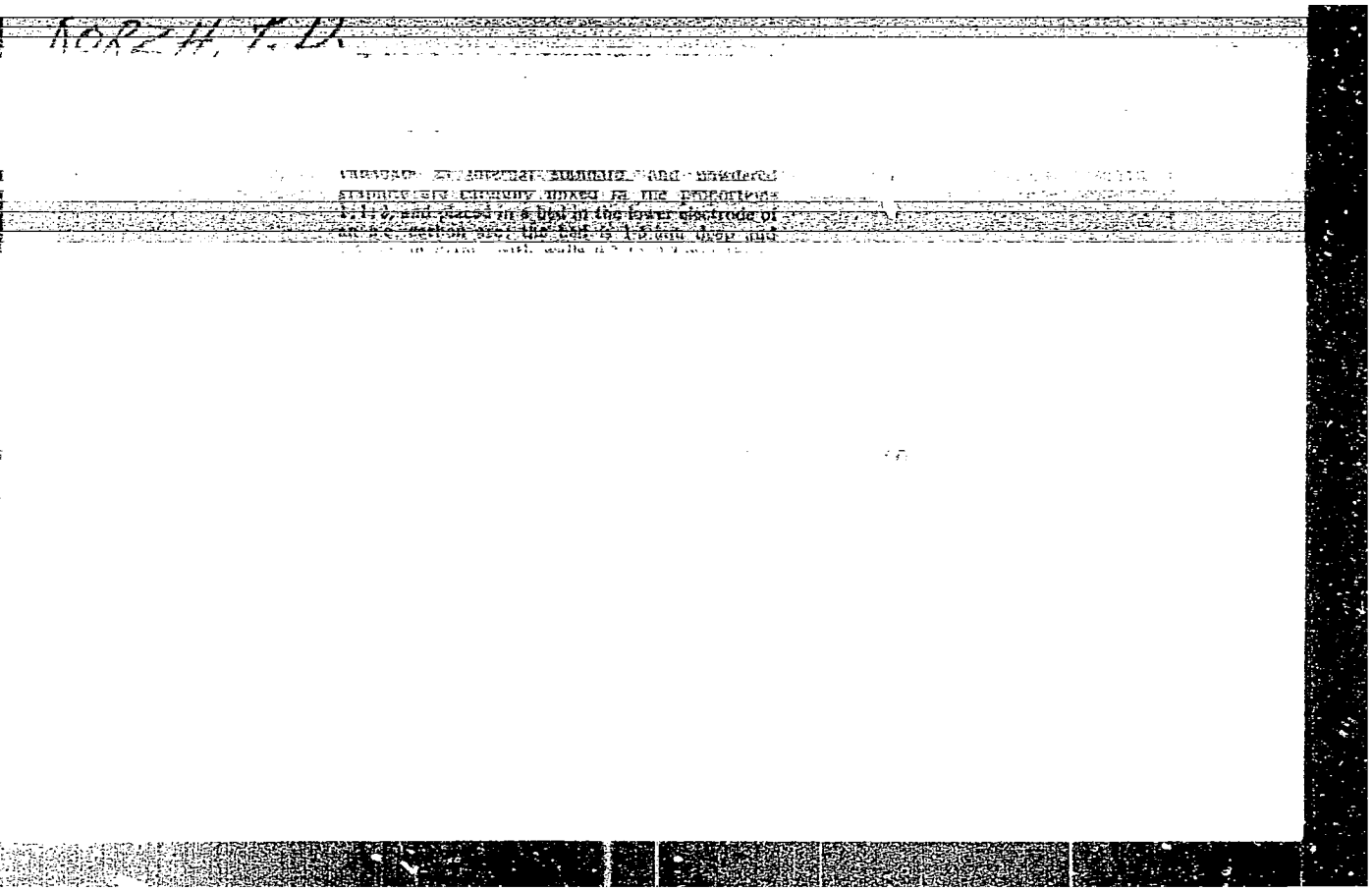
209T52

USSR/Electricity - Arc Discharge (Contd) Feb 52

found 2 types of electron oxidation: mol diffusion predominating and convective diffusion of reacting substances. He considers possible to control and direct transfer of materials by selection of electrode metal and operating conditions. Received 12 Feb 51.

209T52

KORZH, P. D.



KORZH, V.D.

1192* (Russian.) Determination of Iron [illegible] (Copper-Steel) Bars and Rods by the Thermo[illegible] [illegible] Opredelenie zheleza v bimetallicheskikh [illegible] kakh i provoloke termoelektricheskim metodom [illegible] Korzh. Zavodskaia Laboratoriia v. 22 [illegible] 1075-1078

Thermoelectric determination of Fe [illegible] bimetallic Cu-steel bars. Dependence of [illegible] force on temperature and concentration [illegible]

KORZH, P.D.

SOV/137-58-8-18082

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 268 (USSR)

AUTHOR: Korzh, P. D.

TITLE: ~~The Thermoelectric~~ Method of Separation of Chromium-aluminum Steels According to Types (Termoelektricheskiy metod razdeleniya khromo-alyuminiyevykh staley po markam)

PERIODICAL: Sb. nauchn. tr. Magnitogorskiy gornometallurg. in-t, 1957, Nr 13, pp 12-15

ABSTRACT: The application of the thermoelectric method for the separation of three types of Cr - Al Steels, namely, Kh13Yu4, Kh17Yu5, and Kh25Yu5, is examined. The temperature range is determined in which the difference in the thermo-e.m.f. is the greatest (200 - 250°C). In relation to the Cu standard specimen at 200°, the values for the thermo-e.m.f. are 0.05 - 0.15; 0.35 - 0.45, and 0.65 - 0.80 mv, respectively.

1. Aluminum-chromium steel—Classifications
2. Aluminum-chromium steel—Temperature factors
3. Aluminum-Chromium steel—Electrical properties

R. O.

Card 1/1

SOV/137-58-8-18157

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 279 (USSR)

AUTHORS: Korzh, P. D., Kozlova, A. V.

TITLE: Spectroscopic Method for the Analysis of Ferromolybdenum With the Aid of the Electric Spark Transfer (Spektral'nyy metod analiza ferromolibdena pri pomoshchi elektroiskrovogo perenosa)

PERIODICAL: Sb. nauchn. tr. Magnitogorskiy gornometallurg. in-t, 1957, Nr 13, pp 16-21

ABSTRACT: The visual method of determination of Mo in Fe-Mo is described, which is based on the phenomenon of electric erosion, consisting in the transfer of the material of the electrodes from one to the other by the action of the electric discharge. The specimen analyzed serves as one of these electrodes, a Cu rod serves as the other. The distance between them during the transfer is 0.1 mm. The Mo line of 6030 angstrom was observed with the aid of a SL-3 type styloscope. The time from the moment of the switching on of the spark (after the completion of the transfer and the substitution of the sample analyzed by another electrode) to the disappearance of the line indicated was measured. It is demonstrated that a

Card 1/2

SOV/137-59-1-2119

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 277 (USSR)

AUTHOR: Korzh, P. D.

TITLE: Oxidation and Transfer of Material Between Metallic Electrodes (Copper and Steel) in a Direct-current Arc. [Okisleniye i perenos materiala mezhdu metallicheskimi elektrodami (med' i stal') v duge postoyannogo toka]

PERIODICAL: Sb. nauchn. tr. Magnitogorskiy gornometallurg. in-t, 1958, Nr 16, pp 113-131

ABSTRACT: A study was made of the transfer (T) of material during the burning of a direct current arc between Cu and steel electrodes (steel grades 10 and U8). The cylindrical electrodes (E) with flat ends were 6-8 mm in diam and 200 mm long, and the distance between them was 2.5 mm. E were placed horizontally. With a steel rod as the cathode the current intensity was 5 amps and burning time changed to 7 min. In this case the oxidation processes, in the main, occurred on the steel E only. T of material proceeded from the steel E onto the Cu E. Entry of Cu into the plasma of the arc discharge practically ceased after 7 min with Nr-10 steel as the cathode. With steel as the anode

Card 1/2

Oxidation and Transfer of Material Between Metallic Electrodes (cont.)

greater oxidation and growth of an oxide deposit on the anode were observed, the material being transferred from the steel onto the Cu. The picture changed sharply with the change in the diameter of the E; however, the sense of the T remained the same. Anodic pulverization and T were decisive factors in the formation of oxide deposits. It was concluded that by means of a suitable selection of the discharge conditions, the diameter of E, burning time and other parameters of the arc the direction of T of the E material into the arc plasma may be regulated and that by means of a suitable selection of E and parameters of the arc the intake of the element from the E insert can be stopped completely and therefore, the lines of this electrode in the spectrum can be extinguished.

A. Sh.

SOV/137-59-1-2109

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 276 (USSR)

AUTHORS: Korzh, P. D., Kozlova, A. V.

TITLE: Spectroscopic Determination of Manganese and Silicon in Iron Alloys (Spektral'noye opredeleniye margantsa i kremniya v ferrosplavakh)

PERIODICAL: Sb. nauchn. tr. Magnitogorskiy gornometallurg. in-t, 1958, Nr 16, pp 132-136

ABSTRACT: The analyzed test samples differed by the alloy base and the wide range of variation in the amount of their third component (Fe). The photographing of the spectrum was carried out short of the complete burning out of the mixtures from the pit of the electrode and was interrupted at a certain time after the beginning of burning of the arc. It was established that the dilution of the specimen with graphite powder does not ensure a uniform feed of the elements into the arc flame. The powders of all the components of the mixture should be sufficiently fine, ground to $\leq$300 mesh. The photographing was carried out in an alternating-current arc produced by a PS-39 generator. The lower and upper electrodes are ground to shape in a special manner. The spectra were photographed on the

Card 1/2

Spectroscopic Determination of Manganese and Silicon in Iron Alloys

ISP-22 spectrograph. The photometry was performed on the MF-2 microphotometer. The spectrum of each mixture was photographed three times. In the analysis for Mn and Si the analytical pairs of Mn 2939/Cu 2824 and Si 2881/Cu 3036 angstrom, respectively, were used.

V. S.

AUTHORS: Korzh, P.D., Yershova, A.P. 32-1-18/55

TITLE: A Thermoelectric Method of Determining Carbon in Steel During Smelting (Termoelektricheskiy metod opredeleniya ugleroda v stali po khodu plavki).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 41-43 (USSR)

Received [illegible] 1957

ABSTRACT: In the introduction to this paper it is said that in the course of steel casting the carbon content may be variable, which may also cause fluctuations of the thermoelectromotive force of the melt. It is therefore of importance to study the changes of the thermoelectromotive force in steel during the process of melting as well as during the process of hardening. The following conditions must be satisfied when selecting the manner of hardening: 1.) Hardening must be carried out in a uniform manner over the entire surface of the sample. 2.) Hardening must take place already in the course of casting. 3.) Temperature conditions during the hardening process must not change. The most useful way of taking samples was that which was carried out by means of a device described here (fig. 1). Measuring of the thermoelectromotive force in hardened steel samples was carried out with a device which is described as follows:

A Thermoelectric Method of Determining Carbon in Steel During Smelting

32-1-18/55

On a marble base a cylindrical copper electrode is fastened, which has a wedge-shaped incision in its upper part. The lower part of this electrode is in an electric heater. To the upper part of the electrode the soldered joints of a thermocouple are connected, and parallel to this an iron wire was arranged for purposes of comparison. The sample is placed upon the incision of the "hot electrode", and above it the second or "cold electrode" is placed. This "cold electrode" is fastened to a lever and filed to a wedge-like shape in its lower part (in the direction of the sample). In order to increase pressure the lever has a weight at its free end. The following devices are connected with this apparatus: A galvanometer, a potentiometer, an ammeter, and a rheostat (resistance). Determinations carried out by this method take 2-3 minutes. They are particularly recommended for open-hearth plants. There are 3 figures.

ASSOCIATION: Magnitogorsk Institute for Mining and Metallurgy (Magnitogorskiy gorno-metallurgicheskiy institut).

AVAILABLE: Library of Congress

Card 2/2 1. Carbon-Determination 2. Instrumentation

KORZH, P.D.

Determination of chromium in chrome-aluminum steels from e.m.f. values. Zav.lab. no.11:1342-1344 '59. (MIRA 13:4)

1. Magnitogorskiy gorno-metallurgicheskiy institut.
(Chrome-aluminum steel) (Chromium-- Analysis)

34728
S/137/62/000/002/144/144
A052/A101

5 5400

AUTHORS: Korzh, P. D., Gulyayeva, G. P.

TITLE: The thermoelectric method of determining Sb in Pb-Sb alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 14, abstract 2K69 ("Sb. nauchn. tr. Magnitogorskiy gornometallurg. in-t", no. 23, 1961, 12-19)

TEXT: The thermoelectric method of determining Sb in Pb-Sb alloys is described. The method is based on measuring the relation between the thermoelectromotive force and Sb concentration. Three methods of contacting samples with a comparison element were tried. 1) Sn soldering, 2) a contact by means of mechanical clamps, 3) a contact through a molten metal. By the third method the alloy sample and the comparison element were submerged, with one end, into a molten Wood's alloy. The thermoelectromotive force of Pb-Sb samples was measured on the ППТВ -1 (PPTV-1) direct current potentiometer by the compensation method. Bi was used as comparison element. The Sb content was studied in binary alloys containing 4.7 - 8.5% Sb. The calibration curve is plotted as follows: one "junction" formed by the sample and Bi electrode was heated in

Card 1/2

S/137/62/000/002/139/144
A052/A101

AUTHOR: Korzh, P. D.

TITLE: The thermoelectric method of determining carbon in carbon steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 7, abstract 2K32 ("Sb. nauchn. tr. Magnitogorskiy gornometallurg in-t", 1961, no. 23, 20-44)

TEXT: The application of the thermoelectric method to the determination of carbon in У 7 - У 12 (U7 - U12) steel grades is discussed. At the phase conversions in alloys the thermoelectromotive force changes sharply its value and sometimes its sign. To determine the changes mentioned a device has been designed which secures junctions between the tested sample and the comparison element. The tested sample 0.8 - 4 mm in diameter is placed in V-shaped notches of the hot and cold electrodes. The hot electrode, a C-rod with a V-shaped notch in the upper part is placed in the electric furnace housing. The cold electrode, also a C-rod is insulated against the base by an asbestos gasket and against the hot electrode by a thermoinsulating partition. The heating furnace has 4 duties. The conditions for hardening the samples are selected and the technology of all

Card 1/2

S/032/61/027/003/013/025
B101/B203

AUTHORS: Korzh, P. D. and Pererva, V. Ye.

TITLE: Spectroscopic method of determining niobium and zirconium in ores, concentrates, and tails

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 3, 1961, 311-312

TEXT: The authors studied ores, concentrates, and tails in the form of powders of the same size. The concentration range of Nb_2O_5 was 0.01-10%, that of ZrO_2 was 0.01-12%. The samples were not chemically pretreated. The ore was mixed with an internal standard (molybdenum oxide) diluted with carbon powder. Ratio internal standard:ore:carbon = 1:5:7. The mixture was filled into the crater of a carbon electrode and analyzed in the a.c. arc. The carbon powder increased the temperature of the electrode, and prevented the fractional transfer of elements into the plasma. The temperature was also increased by the shape of the electrode: the end had the form of a cylinder 2.5 mm in diameter, in which there was a 3 mm deep crater 2 mm in diameter, (wall thickness of the crater 0.2-0.25 mm).

Spectroscopic method of ...

The counterelectrode used was a carbon rod, 6 mm in diameter, whose top was of conical frustum of the same area as that of the crater. The spectrum was taken with an ИСП-22 (ISP-22) spectrograph, exposure time 2.5 min. The current source was a ДГ-2 (DG-2) generator, 9 a. The analysis was made by the method of homolog pairs described by the first author (Ref. 2: P. D. Korzh, Zavodskaya laboratoriya, XX,8,949 (1954)). This method permits an analysis without photographing the spectrum of the standards on each plate. The calibration curves were plotted by means of synthetic samples of internal standards, niobium oxides, empty rock, and graphite powder. Table 1 gives the analytical results and the concentrations at which the lines of the element to be determined and of the internal standard were equally blackened. The root mean square error was 0.1-0.6%, as against 11.4% indicated by V. V. Nedler (Ref. 3: Zavodskaya laboratoriya, XXIII, 11,2336 (1957)). The reduction of error is explained by the particular shape of the electrode which ensures a higher temperature of samples and a uniform entry of their vapors into the plasma. The method described is used to control the concentration of ores. [Abstracter's note: Essentially complete translation.] There are 2 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

Card 2/3

KORZH, P.D.

Thermoelectric method of determining carbon in carbon steels. (MIRA 14:7)
Zav.lab. 27 no.8:996-998 '61.

1. Magnitogorskiy gorno-metallurgicheskiy institut.
(Steel--Analysis) (Carbon--Analysis)